

The Robots Are Coming! And Maybe We Should Let Them: How Increased Use of Artificial Intelligence in the Workforce Could Pave the Way for a Shorter Work Week

*Kierra Burda Martin**

INTRODUCTION

Artificial intelligence (“AI”) is everywhere: it controls the facial recognition that unlocks your new iPhone, the chatbot you talk to when you contact Amazon’s customer service, and the show recommendations you end up binging on Netflix.¹ With the widespread use of AI in our daily lives, it is not surprising that AI is becoming standard in nearly all industries.² As a result, estimated job losses resulting from increased automation range from anywhere between 9% and 47%.³ AI has the potential to drastically improve our daily lives, but various changes are necessary to avoid the detrimental effects of AI job loss.⁴ The implementation of a shorter work week could be a part of this solution.⁵

* J.D., New England Law | Boston (2023). B.B.A., Roanoke College (2020). I would like to say a special thank you to my husband, Paul, for his constant love and support; to my dad, who inspired me to write about a topic that I have come to love; and to my entire family for their encouragement, guidance, and advice throughout the entire writing process. I would also like to thank the members of the *New England Law Review* for all their hard work and dedication.

¹ Ilija Mihajlovic, *How Artificial Intelligence Is Impacting Our Everyday Lives*, TOWARDS DATA SCI. (June 13, 2019), <https://perma.cc/H9K5-T35N>.

² See *Artificial Intelligence in Every Sector*, BSA | THE SOFTWARE ALLIANCE, <https://perma.cc/P5PG-TCGU> (last visited Apr. 25, 2023) (discussing the impacts of AI on a variety of different industries).

³ EXEC. OFF. OF THE PRESIDENT, ARTIFICIAL INTELLIGENCE, AUTOMATION, AND THE ECONOMY 2 (2016), <https://perma.cc/6W9C-H2X7>.

⁴ E.g., David Schwartz, *The Real-World Potential and Limitations of Artificial Intelligence*, MCKINSEY PODCAST, at 01:38–03:40 (Apr. 25, 2018), <https://perma.cc/9JD6-9PDH>.

⁵ Jonathan Crane, *Is Artificial Intelligence the Key to a 4-Day Workweek?*, RECRUITER, <https://perma.cc/7SRN-BWMK> (last visited Apr. 25, 2023).

Throughout history, the work week changed with the needs of society, and modern movements to increase productivity and work-life balance support implementing a shorter work week.⁶

This Note will address how AI could pave the way for a shorter work week. Using reduced working hours as a solution to AI job loss will both improve workers' quality of life and help the economy withstand this major shift in employment. Part I will give an overview of the development of AI, its effect on employment, historical responses to major shifts in employment, and the current trend towards a shorter work week. Part II will discuss the importance of implementing a shorter work week to minimize the economic consequences of AI and to maximize AI's potential benefits to society. Part III will argue that a public-private initiative to shorten the work week would be an effective solution to AI job loss if implementation of such a program is gradual and targeted. Part IV will outline the need for a comprehensive legislative framework to support a shorter work week and protect the workers most harmed by AI.

I. Background

A. *What Is Artificial Intelligence?*

When people think of AI, the image that typically comes to mind is one of a futuristic world with humanoid robots and self-driving cars.⁷ However, AI is far from futuristic—modern technologies have already started the process of effortlessly integrating elements of AI into nearly every aspect of our daily lives.⁸ Despite this widespread use of AI, defining the term “artificial intelligence” is no easy task.⁹ Merriam-Webster defines AI as “a branch of computer science dealing with the simulation of intelligent behavior in computers.”¹⁰ Nils Nilsson, one of the leading computer scientists in early artificial intelligence,¹¹ provides a different definition:

⁶ See Mary Meisenzahl, *People Have Toyed with the Idea of a 4-Day Workweek for over 80 Years. Here's How the Concept Has Evolved, from the Great Depression to Microsoft's Latest Successful Experiment*, BUS. INSIDER (Nov. 7, 2019, 8:36 AM), <https://perma.cc/2YW9-9QVD>; see also Jack Kelly, *There's a Growing Movement and Petition Circulating to Push for a Four-Day Workweek*, FORBES (June 27, 2021, 2:56 PM EDT), <https://perma.cc/S9MZ-YB8U> (explaining the societal push for a four-day work week, which mimics many labor movements of the past).

⁷ See Dan Robitzski, *You Have No Idea What Artificial Intelligence Really Does*, FUTURISM (Oct. 16, 2018), <https://perma.cc/67DX-6LCC>.

⁸ See RJ Reinhart, *Most Americans Already Using Artificial Intelligence Products*, GALLUP (Mar. 6, 2018), <https://perma.cc/NK9T-PLVJ> (finding that 85% of Americans currently use at least one product that incorporates AI into its technology).

⁹ Scott J. Shackelford & Rachel Dockery, *Governing AI*, 30 CORNELL J.L. & PUB. POL'Y 279, 285 (2020).

¹⁰ *Artificial Intelligence*, MERRIAM-WEBSTER DICTIONARY, <https://perma.cc/JA7E-DSK6> (last visited Apr. 25, 2023).

¹¹ John Markoff, *Nils Nilsson, 86, Dies; Scientist Helped Robots Find Their Way*, N.Y. TIMES (Apr.

“[A]rtificial intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment.”¹² Despite varying definitions, several common themes appear to help make sense of what exactly artificial intelligence involves: a machine that (1) perceives its environment; (2) processes information; (3) makes autonomous decisions; and (4) achieves a specific goal.¹³

One reason a universal definition of artificial intelligence is so hard to find is because the expectations and capabilities of AI have changed drastically since AI’s inception almost a century ago.¹⁴ While the concept of artificial intelligence can be traced back to the ancient Greeks,¹⁵ the discipline of AI dates back to only the mid-20th century.¹⁶ Alan Turing, subject of the 2014 film *The Imitation Game*,¹⁷ is often considered to be the father of AI.¹⁸ While *The Imitation Game* focuses primarily on Turing’s impact on decoding German messages in World War II,¹⁹ Turing’s lesser-known activities included studying computers and asking the question of whether a computer could rival human thought.²⁰ In his paper “Computing Machinery and Intelligence,” Turing proposed a test for determining whether a computer could think like a human.²¹ While the “Turing Test,” as it is known today, has little applicability in modern-day artificial intelligence, Turing’s work acted as a catalyst for the discipline of AI, which flourished in the mid-to-late 20th century.²²

The post-Turing development of AI occurred in waves, featuring a series of rapid progress followed by slow growth.²³ Early enthusiasm for AI began with the “Dartmouth Summer Project on Artificial Intelligence” in

25, 2019), <https://perma.cc/FAM9-5CPT>.

¹² NILS J. NILSSON, *THE QUEST FOR ARTIFICIAL INTELLIGENCE: A HISTORY OF IDEAS AND ACHIEVEMENTS* 13 (2010).

¹³ JOINT RSCH. CTR., *AI WATCH: DEFINING ARTIFICIAL INTELLIGENCE* 8 (2020), <https://perma.cc/Y9LX-6Z5J>.

¹⁴ See Rockwell Anyoha, *The History of Artificial Intelligence*, HARV. UNIV. (Aug. 28, 2017), <https://perma.cc/67P8-H5XT>.

¹⁵ See Tanya Lewis, *A Brief History of Artificial Intelligence*, LIVE SCI. (Dec. 4, 2014), <https://perma.cc/7HF6-R5ZK>.

¹⁶ STEPHAN DE SPIEGELEIRE, MATTHIJS MAAS & TIM SWEIJS, *ARTIFICIAL INTELLIGENCE AND THE FUTURE OF DEFENSE* 31 (2017).

¹⁷ *THE IMITATION GAME* (The Weinstein Co. 2014).

¹⁸ Mandy Tomlinson, *Spotlight on Alan Turing – Father of Artificial Intelligence*, ISABEL HEALTHCARE (July 14, 2016), <https://perma.cc/VMY3-STW5>.

¹⁹ *THE IMITATION GAME*, *supra* note 17.

²⁰ Tomlinson, *supra* note 18.

²¹ Benjamin St. George & Alexander S. Gillis, *Turing Test*, TECHTARGET, <https://perma.cc/J5CR-RBMR> (last updated June 2021).

²² *Id.*

²³ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 31–39.

1956, which consisted of ten researchers gathering to discuss this brand-new scientific discipline.²⁴ This first period of AI growth was primarily one of research, narrow application, and developing excitement over the vast capabilities of AI; however, these idealistic expectations of what AI could do were more advanced than the technology of the time could handle, resulting in a subsequent period of disappointment and decreased funding for research.²⁵ In the 1980s, the development of expert systems—systems that use programmed human knowledge to emulate the decision-making of an expert in that particular field—sparked a second wave of AI progress,²⁶ but once again AI underdelivered as the high cost of testing and updates quickly overwhelmed the overall value of these expert systems.²⁷ This second period of slow growth was short-lived, and, somewhat ironically, the disappointment of AI in the past sparked the next period of rapid development beginning in the 1990s.²⁸ Instead of idealistic goals aimed towards creating “human-level” AI, researchers narrowed their focus to solving specific problems, which resulted in visible technological success in certain aspects of daily life that we continue to see today.²⁹

Since the wave of growth that began in the 1990s, the capabilities and practical applications of AI have rapidly progressed to a point where the average person uses AI on a daily basis.³⁰ Prior to 2012, the progression of AI closely followed Moore’s Law—the theory that computing power doubles approximately every two years³¹—but more recently, computing power has doubled every three to four months.³² Practically speaking, this means that AI is moving into a new era.³³ The previous era was dominated by “narrow AI,” where machines performed a specific task or set of tasks.³⁴

²⁴ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 31–32; *Artificial Intelligence Coined at Dartmouth*, DARTMOUTH, <https://perma.cc/J7BR-DHG3> (last visited Apr. 25, 2023).

²⁵ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 32.

²⁶ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 33; *What Is Expert System (ES)*, IGI GLOB., <https://perma.cc/99FQ-BLF3> (last visited Apr. 25, 2023).

²⁷ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 34.

²⁸ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 34.

²⁹ SPIEGELEIRE, MAAS & SWEIJS, *supra* note 16, at 34 (“[R]esearch was finding utility in a wide range of fields, from games (notably the famous 1997 chess victory, of IBM’s Deep Blue over world champion Garry Kasparov); to logistics, spacecraft and satellite monitoring; robotics; traffic management; medical diagnosis; speech recognition, autonomous vehicles and Google’s search engine, to name a few.”).

³⁰ Bernard Marr, *The 10 Best Examples of How AI Is Already Used in Our Everyday Life*, FORBES (Dec. 16, 2019, 12:13 AM EST), <https://perma.cc/XF7S-NDUU>.

³¹ Cliff Saran, *Stanford University Finds That AI Is Outpacing Moore’s Law*, COMPUT. WKLY. (Dec. 12, 2019, 9:56), <https://perma.cc/9SMN-GZ95>.

³² *Id.*

³³ Jeff Garberson, *Computers, AI Improve Life as the World Enters New Era*, INDEP. (Oct. 17, 2019), <https://perma.cc/W9G8-4VQJ>.

³⁴ Shackelford & Dockery, *supra* note 9, at 286.

The new era is the one envisioned by the ambitious researchers of the 1950s, an era of “artificial general intelligence,” where machines “exhibit intelligent behavior across a broad range of cognitive tasks.”³⁵ With self-driving cars and Jeopardy-winning robots as merely the beginning, the future of AI is on track to drastically alter daily life.³⁶

B. *Impact of AI on Employment*

Of all the changes AI may bring, one of the most frequently discussed in the news is the anticipated job loss associated with its increased use in the workforce.³⁷ Headlines that scream “The Robots Are Coming!” incite fear in the public that robots will soon take their jobs.³⁸ There is some truth to these statements—some predictions indicate that artificial intelligence could replace 30% of the world’s labor force as soon as the year 2030.³⁹ This process of artificial intelligence replacing jobs has already started,⁴⁰ and “The Great Resignation” of COVID-19 has forced businesses to automate at an increased rate to make up for widespread labor shortages.⁴¹

Despite this, many argue that AI will not replace jobs but rather create new jobs, “just as it has been doing since the dawn of the Industrial Revolution.”⁴² This comparison to the Industrial Revolution, most commonly known as the “Second Industrial Revolution,” is not surprising.⁴³ In fact, the rapid technological change of the 21st century is referred to as the

³⁵ Shackelford & Dockery, *supra* note 9, at 282, 286–87; accord Ashish Yadav et al., *Artificial Intelligence – New Era*, 3 INT’L J. NEW TECH. & RES., Mar. 2017, at 30, 30, <https://perma.cc/PP9P-VDSE>.

³⁶ Luke Dormehl, *A History of Artificial Intelligence in 10 Landmarks*, DIGIT. TRENDS (Sept. 23, 2017), <https://perma.cc/WH5L-WS89>.

³⁷ See Calum McClelland, *The Impact of Artificial Intelligence – Widespread Job Losses*, IOT FOR ALL (July 1, 2020), <https://perma.cc/4WDZ-8YYH>.

³⁸ See, e.g., Chris Anstey, *The Robots Are Coming*, BLOOMBERG (Nov. 8, 2021, 6:06 AM EST), <https://perma.cc/J9HA-2PL9>; David Deming, *The Robots Are Coming. Prepare for Trouble.*, N.Y. TIMES (Jan. 30, 2020), <https://perma.cc/8VPM-ZIQL>; Daphne Leprince-Ringuet, *The Robots Are Coming, and This Is How They Will Change the Future of Work*, ZDNET (July 1, 2020), <https://perma.cc/9VTT-ZS2M>; Kenneth A. Taylor, *The Robots Are Coming: Ethics, Politics, and Society in the Age of Artificial Intelligence*, BOS. REV. (Mar. 9, 2020), <https://perma.cc/6RPM-RM2W>.

³⁹ McClelland, *supra* note 37.

⁴⁰ See Valerias Bangert, *AI Is Quietly Eating up the World’s Workforce with Job Automation*, VENTUREBEAT (Jan. 8, 2022, 6:20 AM), <https://perma.cc/S4YX-34UW> (noting that AI replaced approximately 400,000 factory jobs from 1990 to 2007).

⁴¹ Ian Thomsen, *A ‘Red Alert’ for Workers: Businesses Embrace Automation During the COVID-19 Pandemic*, NORTHEASTERN GLOB. NEWS. (Dec. 7, 2021), <https://perma.cc/65ZX-8MQ7>.

⁴² Aaron Smith & Janna Anderson, *AI, Robotics, and the Future of Jobs*, PEW RSCH. CTR. (Aug. 6, 2014), <https://perma.cc/9PWW-VWAK>.

⁴³ See generally Eric Niler, *How the Second Industrial Revolution Changed Americans’ Lives*, HIST. (Jan. 25, 2019), <https://perma.cc/U9SY-M76W> (describing the significance of the Second Industrial Revolution).

“Fourth Industrial Revolution.”⁴⁴

However, there are several reasons why this next wave of automation in the workforce will differ from those of the past.⁴⁵ One major reason is that AI has the capability to automate virtually all industries, whereas past machine automation consisted of only single, industry-specific tasks.⁴⁶ Another is the rapid rate of acceleration in the field of artificial intelligence—recall Moore’s Law, the idea that technological progress increases exponentially, doubling every two years (or, in AI’s case, every couple of months).⁴⁷ It is difficult to comprehend exactly how quickly this technology is actually developing; according to University of Colorado physics professor Albert Allen Bartlett, “[t]he greatest shortcoming of the human race is our inability to understand the exponential function.”⁴⁸ The rapid acceleration of automation across virtually all industries presents a very different picture than the primarily factory-focused changes of the past, making modern automation a serious threat to the workforce and the economy.⁴⁹

While AI has the capability to affect nearly every industry, some industries are at an even greater risk of automation; production, transportation, and food preparation industries are sometimes recognized as facing an even higher risk of automation.⁵⁰ These industries are most affected because they involve a high percentage of easily automated, predictable physical activities with relatively little human interaction.⁵¹ Automation replaces the less-educated, lower-skilled workers, and the jobs created tend to require more cognitively complex tasks and higher education levels.⁵² Thus, automation is different this time because job displacement will contribute to growing inequality in wages,⁵³ while the “fruits of innovation” will go directly to the businesses rather than the displaced workers.⁵⁴

⁴⁴ Thomas Philbeck & Nicholas Davis, *The Fourth Industrial Revolution: Shaping a New Era*, 72 J. INT’L AFF. 17, 17 (2018).

⁴⁵ Cynthia Estlund, *What Should We Do After Work? Automation and Employment Law*, 128 YALE L.J. 254, 263–83 (2018); McClelland, *supra* note 37.

⁴⁶ McClelland, *supra* note 37.

⁴⁷ McClelland, *supra* note 37; Saran, *supra* note 31.

⁴⁸ McClelland, *supra* note 37.

⁴⁹ McClelland, *supra* note 37; Freddie Wilkinson, *Industrialization, Labor, and Life*, NAT’L GEOGRAPHIC, <https://perma.cc/4RPZ-RPH2> (last updated June 2, 2022).

⁵⁰ Mark Muro et al., *Automation and Artificial Intelligence: How Machines Are Affecting People and Places*, BROOKINGS (Jan. 24, 2019), <https://perma.cc/BP8B-XWRP>.

⁵¹ Estlund, *supra* note 45, at 268.

⁵² MARTIN FORD, RISE OF THE ROBOTS: TECHNOLOGY AND THE THREAT OF A JOBLESS FUTURE 48 (2015).

⁵³ Estlund, *supra* note 45, at 264.

⁵⁴ FORD, *supra* note 52, at 35.

C. Governmental Focus on AI

The vast potential of AI and the effects that innovation has on society have generated increased interest by recent government administrations in the developments of AI.⁵⁵ In October 2016, the Obama administration released two reports on AI: “Preparing for the Future of Artificial Intelligence” and “The National Artificial Intelligence Research and Development Plan.”⁵⁶ The reports, largely overshadowed by the 2016 presidential election, outlined the importance of AI and the government’s role in regulating it while still encouraging innovation.⁵⁷ This focus on AI continued and even flourished throughout the Trump administration; during his four years in office, Trump issued an executive order on AI, doubled AI research investment, established national AI research institutes, released new regulatory guidance on AI, hosted a National Summit on Artificial Intelligence, and even issued an update to Obama’s National Artificial Intelligence Research and Development Plan.⁵⁸ The Biden administration is on track to continue the work of its predecessors in AI, recently launching the National Artificial Intelligence Research Resource Task Force to develop a comprehensive strategy and implementation plan for the development of AI.⁵⁹

Despite increased government interest in AI, legislative action to actually regulate it is lacking.⁶⁰ Congress recently enacted the National AI Initiative Act of 2020, but the bipartisan legislation once again focuses on

⁵⁵ See, e.g., Ajay Agrawal, Joshua Gans & Avi Goldfarb, *The Obama Administration’s Roadmap for AI Policy*, HARV. BUS. REV. (Dec. 21, 2016), <https://perma.cc/3D24-J9NC> (explaining the Obama administration’s focus on AI); Michael Kratsios & Chris Liddell, *The Trump Administration Is Investing \$1 Billion in Research Institutes to Advance Industries of the Future*, TRUMP WHITE HOUSE (Aug. 26, 2020), <https://perma.cc/CE6W-524V> (explaining the Trump administration’s focus on AI); Tony Samp, Steven R. Phillips & Ignacio E. Sanchez, *Technology, Artificial Intelligence in Focus for the Biden Administration and the 117th Congress Seen Through the Lens of Competition with China*, LEXOLOGY (Mar. 18, 2021), <https://perma.cc/QP6B-EZHJ> (explaining the Biden administration’s focus on AI).

⁵⁶ EXEC. OFF. OF THE PRESIDENT & NAT’L SCI. & TECH. COUNCIL COMM. ON TECH., PREPARING FOR THE FUTURE OF ARTIFICIAL INTELLIGENCE (2016), <https://perma.cc/U4GB-TY7E>; NAT’L SCI. & TECH. COUNCIL, THE NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH AND DEVELOPMENT STRATEGIC PLAN (2016), <https://perma.cc/G4QX-MC2J>.

⁵⁷ Agrawal, Gans & Goldfarb, *supra* note 55.

⁵⁸ *Artificial Intelligence for the American People*, TRUMP WHITE HOUSE, <https://perma.cc/M3D3-6FP5> (last visited Apr. 25, 2023).

⁵⁹ *The Biden Administration Launches the National Artificial Intelligence Research Resource Task Force*, WHITE HOUSE (June 10, 2021), <https://perma.cc/MGN2-3ZGD>; see also *National Artificial Intelligence Initiative Overseeing and Implementing the United States National AI Strategy*, NAT’L A.I. INITIATIVE OFF., <https://perma.cc/F4TN-V65X> (last visited Apr. 25, 2023) (containing information on the current government programs and initiatives aimed at the development of AI).

⁶⁰ See Shackelford & Dockery, *supra* note 9, at 300–02.

research and development of AI technology rather than on a plan to minimize the economic consequences of AI implementation.⁶¹ Enacted legislation geared towards regulating AI is often industry specific and lacks any national scheme to combat widespread issues like AI job loss.⁶² Yet, the government is not oblivious to the potential effects of increased automation; in December 2016, as a follow up to the two October 2016 reports, the Obama administration released an additional report called “Artificial Intelligence, Automation, and the Economy,” which focused on the disruption to the labor market caused by AI.⁶³ While the government has repeatedly recognized the impact that AI will have on employment and the economy, it has chosen to avoid regulating AI out of fear that doing so will hinder innovation.⁶⁴

D. Governmental and Societal Responses to Historical Shifts in Employment

As critics of the “robots will take your job” narrative love to point out, automation in the workforce is nothing new.⁶⁵ The Second Industrial Revolution marked a period of overall economic growth as new technologies increased productivity and economic output.⁶⁶ These new technologies shifted society away from agriculture and towards urbanized factory employment.⁶⁷ However, the government never needed to intervene to combat job loss from increased automation in the agricultural industry because more jobs were created as factory work increased.⁶⁸ These factory jobs were easy to transition into due to short training periods, lack of formalized education requirements, and routine work—a situation that is quite different from the jobs created by artificial intelligence today.⁶⁹

While the Industrial Revolution did not cause high unemployment rates as predicted in today’s automation wave, the shift in employment towards

⁶¹ See National Artificial Intelligence Initiative Act of 2020, H.R. 6216, 116th Cong. (2020).

⁶² Shackelford & Dockery, *supra* note 9, at 301.

⁶³ EXEC. OFF. OF THE PRESIDENT, *supra* note 3, at 1.

⁶⁴ See Mark MacCarthy, *AI Needs More Regulation, Not Less*, THE BROOKINGS INST. (Mar. 9, 2020), <https://perma.cc/8EPV-7ECN>.

⁶⁵ John Hawksworth, *Is Artificial Intelligence Replacing Jobs? Here’s the Truth*, WORLD ECON. F. (Sept. 18, 2018), <https://perma.cc/L4L8-RX4V>.

⁶⁶ Ryan Engelman, *The Second Industrial Revolution, 1870-1914*, U.S. HIST. SCENE, <https://perma.cc/ZJ7Y-3Q5P> (last visited Apr. 25, 2023).

⁶⁷ *Industrial Revolution*, HIST., <https://perma.cc/LQR7-Q75P> (last updated Nov. 14, 2022); see also Louis D. Johnston, *History Lessons: Understanding the Decline in Manufacturing*, MINNPOST (Feb. 22, 2012), <https://perma.cc/5KYB-BF4Y> (noting the decline of agriculture in the labor force from 70% in 1840 to 10% in 1950).

⁶⁸ See James Chen, *Industrial Revolution Definition: History and Pros and Cons*, INVESTOPEDIA, <https://perma.cc/FN3X-2YNW> (last updated Oct. 2, 2022).

⁶⁹ James E. Bessen, *The Skills of the Unskilled in the American Industrial Revolution 1* (Sept. 2000) (unpublished Research on Innovation Working Paper, Boston University School of Law), <https://perma.cc/CT4K-P3B2>.

factory work created other issues that prompted the need for government action.⁷⁰ Factory workers faced dangerous working conditions, low pay, and long hours of work; as a result, workers formed labor unions to push for more protections.⁷¹ These labor unions put pressure on the government to introduce legislation to regulate working conditions,⁷² including national strikes to shorten the work day to eight hours.⁷³ The initial legislation came from individual states in the form of factory inspections for working conditions, but the lack of uniformity across states led to criticism of the federal government for not stepping in to protect workers.⁷⁴ Eventually, the federal government responded to labor union pressure when it passed the Keating-Owen Child Labor Act in 1916 to combat children's exposure to hazardous work environments in factories.⁷⁵

This concept of combating labor issues through the use of legislation is not unique to the Industrial Revolution.⁷⁶ During the Great Depression, Franklin D. Roosevelt launched a series of economic relief programs, known as the New Deal, designed to revitalize the economy and combat record unemployment levels.⁷⁷ The New Deal legislation included banking reform laws and emergency relief programs,⁷⁸ but massive unemployment also reignited pressure seen during the Industrial Revolution to shorten the work week.⁷⁹ In fact, a bill was introduced (and eventually passed in the Senate) to temporarily shorten the work week to thirty hours.⁸⁰ FDR initially supported the bill, but resistance from businesses allowed him to strike a compromise where businesses would voluntarily shorten the work week

⁷⁰ Judson MacLaury, *Government Regulation of Workers' Safety and Health, 1877–1917*, U.S. DEP'T LAB., <https://perma.cc/X672-LRKW> (last visited Apr. 25, 2023).

⁷¹ Elias Beck, *Labor Movement in the Industrial Revolution*, HIST. CRUNCH, <https://perma.cc/Q7F8-JBSR> (last updated Mar. 25, 2022).

⁷² MacLaury, *supra* note 70.

⁷³ *Labor, Recreation, and Rest: The Movement for the Eight-Hour Day*, UNIV. MD., <https://perma.cc/KTE3-D9DH> (last visited Apr. 25, 2023) [hereinafter *Labor, Recreation, and Rest*].

⁷⁴ See MacLaury, *supra* note 70, §4. Critique of State Action.

⁷⁵ Graham Boone, *Labor Law Highlights, 1915–2015*, U.S. BUREAU LAB. STAT. (Oct. 2015), <https://perma.cc/Q3RG-SGVK>.

⁷⁶ See *Summary of the Major Laws of the Department of Labor*, U.S. DEP'T LAB., <https://perma.cc/KJ8E-QTJ8> (last visited Apr. 25, 2023) (listing the major labor and employment laws that protect workers today).

⁷⁷ Kimberly Amadeo, *New Deal Summary, Programs, Policies, and Its Success: Four Surprising Ways the New Deal Affects You Today*, THE BALANCE, <https://perma.cc/P5FZ-EWRV> (last updated Mar. 29, 2022). See generally *Great Depression History*, HIST., <https://perma.cc/7ZfZ-GQAN> (last updated Jan. 12, 2023) (describing the history of the Great Depression).

⁷⁸ *President Franklin Delano Roosevelt and the New Deal*, LIBR. CONG., <https://perma.cc/S6JP-CTVX> (last visited Apr. 25, 2023).

⁷⁹ *Labor, Recreation, and Rest*, *supra* note 73.

⁸⁰ Gillian Brockell, *That Time America Almost Had a 30-Hour Workweek*, WASH. POST (Sept. 6, 2021, 9:19 AM EDT), <https://perma.cc/8YHR-4WC8>.

instead.⁸¹

Eventually, the federal government rose to the demands of society and passed the Fair Labor Standards Act (FLSA), which regulated the work week by requiring employers to pay an employee overtime if the employee worked over a certain number of hours in a week.⁸² When Congress originally enacted the FLSA in 1938, the work week was set at forty-four hours, but Congress later amended it to the current forty-hour work week in 1940.⁸³ In reality, Congress and the FLSA did little to create a forty-hour work week in the United States.⁸⁴ Much like the push from labor unions for better working conditions during the Industrial Revolution, society largely initiated the forty-hour work week through strikes, and companies caved in to the pressure.⁸⁵ However, government regulation was a necessary final step in the movement towards a forty-hour work week.⁸⁶

E. Modern Push for a Shorter Work Week

The hard-fought push for a forty-hour work week is in the past, and in its place is a similar movement: a four-day work week.⁸⁷ While the concept of a four-day work week has been around since the Great Depression,⁸⁸ the movement has been gaining traction in the past few years.⁸⁹ Since the influx of remote work due to COVID-19 gave employees a taste of the flexible work life, companies have been exploring various work options to increase flexibility and productivity.⁹⁰ Labor unions and grassroots organizations alike are pushing for the adoption of a four-day work week,⁹¹ and recent polls show that 70% of workers support reducing the work week to four

⁸¹ *Id.*

⁸² See Fair Labor Standards Act of 1938, 29 U.S.C. § 207 (2010).

⁸³ Shana Lebowitz & Marguerite Ward, *Maryland Considers a Bill Incentivizing the 4-Day Workweek. Here's How the 5-Day Workweek Became So Popular in the First Place.*, BUS. INSIDER (Feb. 2, 2023, 2:10 IST), <https://perma.cc/F9ZH-3Y4Y>.

⁸⁴ See *id.*

⁸⁵ *The Five-Day Week in Industry*, CQ PRESS, <https://perma.cc/PF62-CLUQ> (last visited Apr. 25, 2023); Lebowitz & Ward, *supra* note 83.

⁸⁶ See Lebowitz & Ward, *supra* note 83.

⁸⁷ Kelly, *supra* note 6.

⁸⁸ Meisenzahl, *supra* note 6.

⁸⁹ See Sarah Roach, *Silicon Valley Has a New Recruitment Strategy: The 4-Day Workweek*, PROTOCOL (Aug. 5, 2021), <https://perma.cc/F2RL-XP8H>.

⁹⁰ *Id.*

⁹¹ See, e.g., Alexia Fernández Campbell, *The Case for a 4-Day Workweek*, VOX (Sept. 13, 2019, 2:20 PM EDT), <https://perma.cc/2UEF-V45U> (noting that unions are proposing decreasing the number of days in a work week from five to four); *The Pilot Results Are Here!, 4 DAY WK. GLOB.*, <https://perma.cc/P9XF-CNES> (last visited Apr. 25, 2023) (showing how a grassroots organization, 4 Day Week Global, is creating a platform for companies to join the four-day work week movement).

days.⁹²

With this widespread worker support, several companies have begun testing a four-day work week.⁹³ In 2019, Microsoft Japan implemented a “Work-Life Choice Challenge,” which gave all employees Fridays off without reducing their pay.⁹⁴ While the pilot program only lasted five weeks, the experiment was an overwhelming success—productivity increased by 40%, and 92% of employees approved of the shorter work week.⁹⁵ This is especially significant given that Japan’s work culture is known for being so intense that the Japanese coined the term “karoshi” — death from overwork.⁹⁶ Canon UK is another major employer that recently announced a trial of a four-day work week without any pay cuts.⁹⁷ US-based companies, while slower to adopt these changes than companies abroad, have also started to jump on the bandwagon: in 2021, Kickstarter announced an experiment with a four-day work week for its employees.⁹⁸ US-based company Bolt implemented a four-day work week trial beginning in the fall of 2021, and the company saw so much success that it announced a permanent change to a four-day work week.⁹⁹ Due to the success of companies like Bolt, the list of businesses implementing a four-day work week continues to grow.¹⁰⁰

The private sector’s modern push for a four-day work week has also encouraged government action.¹⁰¹ Representative Mark Takano introduced a bill in 2021 that would create a thirty-two-hour work week by requiring overtime pay after an employee exceeds thirty-two hours of work.¹⁰² While that version of the bill died in Congress in 2023,¹⁰³ several countries have

⁹² Jennifer Berg, Chris Jackson & Talia Wiseman, *Two-Thirds of Americans Support Implementing a 4-Day Work Week*, IPSOS (Aug. 11, 2021), <https://perma.cc/9TDG-595F>.

⁹³ Amanda Schiavo, *10 Companies That Have Adopted the 4-Day Workweek*, EMP. BEN. NEWS (Jan. 10, 2022, 3:26 PM), <https://perma.cc/DH3L-9AAW>.

⁹⁴ Kari Paul, *Microsoft Japan Tested a Four-Day Work Week and Productivity Jumped by 40%*, THE GUARDIAN (Nov. 4, 2019, 5:14 PM EST), <https://perma.cc/CBR4-3C6N>.

⁹⁵ *Id.*

⁹⁶ Danielle Demetriou, *Employees in the Country Whose Brutal Office Culture Has Led to Several Deaths Are Beginning to Rethink the Tradition*, BBC (Jan. 17, 2020), <https://perma.cc/VN94-3ZYN>.

⁹⁷ Jasper Jolly, *Canon’s UK Arm to Become Latest Company to Trial Four-Day Week*, THE GUARDIAN (Jan. 16, 2022, 10:49 AM EST), <https://perma.cc/94QA-RV8M>.

⁹⁸ Joe Pinsker, *What It Means That Kickstarter Is Trying a 4-Day Workweek*, THE ATL., <https://perma.cc/G24U-QTKS> (last updated June 22, 2021, 12:10 PM ET).

⁹⁹ Michelle Fox, *This Company Just Decided to Give Employees a 4-Day Workweek Permanently*, CNBC (Jan. 5, 2022, 10:30 AM EST), <https://perma.cc/SY55-6PL2>.

¹⁰⁰ Henry O’Loughlin, *273 Companies with 4-Day Work Weeks*, BUILD REMOTE (Apr. 1, 2023), <https://perma.cc/4HL2-52XR> (including a list that is periodically updated with new companies that have implemented a four-day work week).

¹⁰¹ See Irina Ivanova, *Four-Day Workweek Gains Support Among Progressives in Congress*, CBS NEWS (Dec. 8, 2021, 2:17 PM), <https://perma.cc/XY4F-XEDG>.

¹⁰² Thirty-Two Hour Workweek Act, H.R. 4728, 117th Cong. (2021); Ivanova, *supra* note 101.

¹⁰³ See H.R. 4728: *Thirty-Two Hour Workweek Act*, GOVTRACK, <https://perma.cc/ET6L-KJDY>

introduced legislation to implement a four-day work week.¹⁰⁴ Just like the movement for a shorter work week, these legislative experiments are nothing new.¹⁰⁵ However, the increased pressure on companies and governments to decrease working hours invites the question: “Is the Four-Day Workweek Finally Within Our Grasp?”¹⁰⁶

II. Importance/Relevance

A. *Without Legislation, AI Could Destroy the Economy*

Imagine a world where instead of FDR’s New Deal legislation, the government sat back and allowed businesses to attempt to solve the unprecedented unemployment rates of the Great Depression on their own.¹⁰⁷ In essence, that is exactly what the government is doing by ignoring the need to regulate AI.¹⁰⁸ Predictions of job loss due to the threat of automation range anywhere from 9% to 47%.¹⁰⁹ With the potential that a third of US workers could be unemployed by 2030, the government must take some sort of action to combat the potential mass unemployment rates caused by AI.¹¹⁰ The effects of mass unemployment—compounded by the speed at which the power and adoption of AI is accelerating¹¹¹—include costs to both the economy and society.¹¹² High unemployment rates lower the nation’s economic output and result in both increased government spending and reduced tax revenue.¹¹³ Socially, high unemployment rates cause decreased consumer spending, lower quality of life, increased homelessness, political instability, and increased crime rates.¹¹⁴ While many think of the robot revolution as a futuristic tale of exaggerated proportions, the effects of AI, both positive and negative, have already started.¹¹⁵ The time to regulate is

(last visited Apr. 25, 2023).

¹⁰⁴ Henry O’Loughlin, *18 Countries with a 4-Day Work Week (Proposed or Law)*, BUILD REMOTE (Feb. 26, 2023), <https://perma.cc/DCZ3-L2UE>.

¹⁰⁵ See Charles S. Catlin, *Four-Day Work Week Improves Environment*, 59 J. ENV’T. HEALTH, Mar. 1997, at 12, 12–15 (demonstrating support for the shorter work week as early as in 1997).

¹⁰⁶ Kevin J. Delaney, *Is the Four-Day Workweek Finally Within Our Grasp?*, N.Y. TIMES (Nov. 23, 2021), <https://perma.cc/32FP-K3TG>.

¹⁰⁷ See David F. Weiman, *Imagining a World Without the New Deal*, WASH. POST (Aug. 12, 2011), <https://perma.cc/HRU7-4CMH>.

¹⁰⁸ See MacCarthy, *supra* note 64.

¹⁰⁹ EXEC. OFF. OF THE PRESIDENT, *supra* note 3, at 2.

¹¹⁰ Thomas Franck, *McKinsey: One-Third of US Workers Could Be Jobless by 2030 Due to Automation*, CNBC, <https://perma.cc/5KC8-BJTT> (last updated Nov. 29, 2017, 1:43 PM EST).

¹¹¹ See Saran, *supra* note 31.

¹¹² Tejvan Pettinger, *Economic Costs of Unemployment*, ECON. HELP (June 28, 2019), <https://perma.cc/JY5A-A39C>.

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ See Darina L., *Rise of Robots – Jobs Lost to Automation Statistics in 2022*, LEFRONIC,

now.¹¹⁶

B. *The Benefits of a Shorter Work Week*

Immediate regulation of AI through the implementation of a shorter work week would allow the government to capitalize on the current societal pressures brought forth by the modern push for a four-day work week.¹¹⁷ Reduction in the work week has proven extremely effective in combating unemployment (one of the major issues associated with increased automation).¹¹⁸ However, the benefits of a shorter work week go far beyond acting as a counterbalance for the job loss associated with AI.¹¹⁹ In fact, the vast majority of the four-day work week movement has nothing to do with AI, instead focusing on the proven benefits of a reduced work week.¹²⁰ These benefits include higher productivity rates, increased leisure time, employer office cost reductions, decreased commuting time, greater employee satisfaction, and improved mental health.¹²¹ To achieve these benefits it is important to utilize societal pressures before support for the cause diminishes, like has happened to similar movements in the past.¹²²

C. *Unlocking the Full Potential of AI*

If government action can minimize the risks of rapid adoption of AI, then AI will greatly improve our quality of life.¹²³ In the medical field, AI has already proven more effective than humans in aspects of diagnostic medicine, such as the detection of lung cancer.¹²⁴ In the education field, AI could assist in creating personalized lesson plans, giving all students equal access to quality education.¹²⁵ AI has the ability to improve nearly every

<https://perma.cc/5KSY-CZMB> (last updated Jan. 23, 2022) (noting that 1.7 million jobs have been replaced by automation since 2000 alone).

¹¹⁶ See MacCarthy, *supra* note 64.

¹¹⁷ See Kelly, *supra* note 6.

¹¹⁸ John Henize, *Can a Shorter Workweek Reduce Unemployment?*, 37 SIMULATION 145, 145 (1981).

¹¹⁹ See Jonathan Crane, *Artificial Intelligence Is the Secret to a 4-Day Workweek*, HRTECH SERIES, <https://perma.cc/EAZ2-P4XN> (last updated Apr. 21, 2020).

¹²⁰ See Jack Kelly, *Interest and Excitement About the Adoption of a Four-Day Workweek Is Picking up Speed*, FORBES (Oct. 29, 2021, 12:24 PM EDT), <https://perma.cc/9QNW-Y6HA>.

¹²¹ Janice Neipert Hedges, *A Look at the Four-Day Workweek*, MONTHLY LAB. REV., Oct. 1971, at 33, 34; *The Benefits of a Four-Day Work Week*, IRIS FMP (Oct. 11, 2021), <https://perma.cc/7VMX-HDXE>.

¹²² See Claudia N. Lombardo, *Shorter Workweek in a Tough Economy*, HR DAILY ADVISOR, <https://perma.cc/7RKQ-5ZQP> (last updated Feb. 4, 2010).

¹²³ See Kashyap Vyas, *7 Benefits of AI That Will Help Humanity, Not Harm It*, INTERESTING ENG'G (Apr. 6, 2021), <https://perma.cc/TBA9-WAMD>.

¹²⁴ Ashley Brooks, *The Benefits of AI: 6 Societal Advantages of Automation*, RASMUSSEN UNIV. (Nov. 4, 2019), <https://perma.cc/Y3FS-8CMV>.

¹²⁵ *Id.*

aspect of daily life.¹²⁶ “Emerging technology offers the real potential for humans to achieve a post-professional era where we are not defined by our jobs, but a new purpose to enhance the human condition and the world.”¹²⁷ However, in order to realize the full potential of AI, society and the government must work together to minimize the risks and maximize the benefits of the AI takeover.¹²⁸

ANALYSIS

III. The Government Should Work Together with Companies in a Public-Private Initiative to Combat AI Job Loss Through the Implementation of a Shorter Work Week

A. *A Shorter Work Week Would Be an Effective Way of Increasing Jobs and Reducing Unemployment*

While exact predictions of AI job loss may vary, artificial intelligence has the very real potential of completely decimating the economy.¹²⁹ One of the most feared impacts of this rapid workforce automation is the resulting unemployment that accompanies job loss.¹³⁰ This “technological unemployment”—a permanent displacement of workers that results from machines replacing human labor—has greater long-term consequences than other forms of unemployment, but the concept of unemployment itself is nothing new.¹³¹ One way governments have reduced unemployment in the past is by implementing programs to reduce the number of hours worked.¹³² Analyzing the ways governments have used shorter working hours to reduce unemployment in the past helps to demonstrate how shortening the work week would be an effective tool in minimizing the harm caused by AI-

¹²⁶ See Janna Anderson & Lee Rainie, 3. *Improvements Ahead: How Humans and AI Might Evolve Together in the Next Decade*, PEW RSCH. CTR. (Dec. 10, 2018), <https://perma.cc/9P8J-NJGA>.

¹²⁷ Cormac Ó Conaire, *Instead of Taking Our Jobs, What If AI Just Lets Us Give Our Lives More Purpose?*, FAST CO. (Dec. 6, 2021), <https://perma.cc/2X2Y-YX3E>.

¹²⁸ See Bob Violino, *Government, Private Sector Need to Work Together to Advance Tech Innovation and Enhance Security*, CNBC (Jan. 19, 2022, 2:37 PM EST), <https://perma.cc/7LKU-Q65Y>.

¹²⁹ See Morgan R. Frank et al., *Toward Understanding the Impact of Artificial Intelligence on Labor*, 116 PROC. NAT’L ACAD. SCI. U.S. 6531, 6531 (2019).

¹³⁰ Darrell M. West, *Will Robots and AI Take Your Job? The Economic and Political Consequences of Automation*, BROOKINGS INST. (Apr. 18, 2018), <https://perma.cc/7LKU-Q65Y>.

¹³¹ See Michael B. Scheler, *Technological Unemployment*, 154 ANNALS AM. ACAD. POL. & SOC. SCI. 17, 18–19 (1931).

¹³² See Philippe Askenazy, *Work Time Regulation in France from 1996 to 2012*, 37 CAMBRIDGE J. ECON. 323, 323–25 (2013) (discussing France’s expansion of employment through the reduction of working time); Jason E. Taylor, *Work-Sharing During the Great Depression: Did the ‘President’s Reemployment Agreement’ Promote Reemployment?*, 78 ECONOMICA 133, 133–37 (2011) (discussing the limitation of working hours during the Great Depression as a means of combating unemployment).

related job loss.¹³³

Beginning this analysis with the United States, the Great Depression was easily the worst economic crisis in the nation's history, leaving fifteen million individuals without jobs and elevating unemployment rates to more than 20%.¹³⁴ FDR's New Deal legislation is known for being the governmental stimulant that kick-started economic recovery through a wide range of economic and social spending programs.¹³⁵ As part of this economic recovery plan, FDR urged for federal legislation to shorten the work week, and a bill passed in the Senate but ultimately failed due to opposition from businesses.¹³⁶ While the federal mandate did not succeed, FDR still saw the value of reducing working hours as a means of combating the Depression and decided to implement a voluntary program known as the President's Reemployment Agreement (PRA).¹³⁷ In a public letter addressed to "Every Employer" in the country, FDR called on companies to limit working hours as a method of spreading out employment opportunities, thus increasing jobs.¹³⁸ This program was completely voluntary, and, instead of government mandates, FDR used notions of patriotism to inspire the nation to comply with the program, calling companies who refuse to do so "selfish."¹³⁹ Maximum working hours under the PRA varied by industry, but factory workers in particular had a maximum work week of thirty-five hours.¹⁴⁰ Once a company signed the PRA pledge, the local post office would display the company's name on an "Honor Roll" of complying firms, and the company could receive free "Blue Eagle" posters and stickers to signify their voluntary compliance with the program.¹⁴¹ Likewise, consumers signed a pledge stating they would "support and patronize" these businesses.¹⁴² In the end, the program was an overwhelming success, with the Roosevelt administration stating that the PRA put four million Americans to work.¹⁴³

¹³³ See Arvind Ashta, *France Shortens Work-Week Sharing Scarce Jobs*, 35 *ECON. & POL. WKLY.* 3527, 3527–29 (2000); Taylor, *supra* note 132, at 133–37.

¹³⁴ *Great Depression History*, *supra* note 77.

¹³⁵ See *Great Depression History*, *supra* note 77.

¹³⁶ Brockell, *supra* note 80.

¹³⁷ Taylor, *supra* note 132, at 133.

¹³⁸ Franklin D. Roosevelt, *The President's Reemployment Agreement* (July 27, 1933) (transcript available at <https://perma.cc/YL3X-3ZV3>); see also Taylor, *supra* note 132, at 133–37 (explaining the effect of the PRA and how the PRA worked to increase jobs through voluntary initiatives by companies).

¹³⁹ See Franklin D. Roosevelt, President, U.S., *Fireside Chat 3: On the National Recovery Administration* (July 24, 1933) (transcript at <https://perma.cc/FSV8-2L7W>); see also Taylor, *supra* note 132, at 133–36 (explaining how companies who signed the PRA received paraphernalia from the government as a sign of their patriotism).

¹⁴⁰ Roosevelt, *supra* note 138.

¹⁴¹ Taylor, *supra* note 132, at 135–36.

¹⁴² Taylor, *supra* note 132, at 135.

¹⁴³ Taylor, *supra* note 132, at 133.

Roughly a half century later, a similar situation began to develop in France.¹⁴⁴ Beginning in the 1980s and continuing into the 1990s, unemployment started to rise across Europe.¹⁴⁵ As a result, companies and countries alike began to experiment with work-sharing programs: Germany instituted an early retirement program at the age of fifty-five, and Volkswagen and other companies initiated a four-day work week.¹⁴⁶ With unemployment rates reaching over 10%, France began experimenting with various laws aimed at shortening the work week to limit unemployment.¹⁴⁷ In 1982, France introduced legislation limiting the work week to thirty-nine hours, but the legislation fell short of the thirty-five-hour work week that many were pushing for.¹⁴⁸ As unemployment rates continued to rise over the next decade, the push for a shorter work week reignited and inspired a series of laws that successfully and permanently altered France's employment landscape.¹⁴⁹ In 1996, France passed the Robien Law, which incentivized companies to reduce working hours by 10% to 15% through a government-financed reduction in social insurance contributions.¹⁵⁰ The Robien Law was somewhat successful, and two years later, France passed the first of two Aubry Laws.¹⁵¹ Aubry I, the first Aubry Law, mandated a 35-hour work week beginning in 2000 or 2002 (depending on a company's size) and introduced financial incentives for immediate compliance.¹⁵² Aubry II, passed in 2000, reaffirmed the requirement of a 35-hour work week for all large employers and made the financial incentives (reducing Social Security benefits) permanent for companies at thirty-five hours, thereby encouraging small employers to reduce hours before the 2002 mandate.¹⁵³ France's goal of creating employment and redistributing the share of jobs was successful—by reducing the work week by only four hours, France saw a 6% to 9% increase in jobs.¹⁵⁴

As the examples in the United States and France demonstrate, combating unemployment through a reduction of working hours is not a new concept.¹⁵⁵ The rationale behind these programs is simple: reducing

¹⁴⁴ See Ashta, *supra* note 133, at 3527.

¹⁴⁵ Ashta, *supra* note 133, at 3527.

¹⁴⁶ Ashta, *supra* note 133, at 3527.

¹⁴⁷ Askenazy, *supra* note 132, at 324–25.

¹⁴⁸ Askenazy, *supra* note 132, at 324.

¹⁴⁹ Askenazy, *supra* note 132, at 325.

¹⁵⁰ Askenazy, *supra* note 132, at 325.

¹⁵¹ See Ashta, *supra* note 133, at 3528.

¹⁵² Askenazy, *supra* note 132, at 325 (requiring firms with greater than twenty employees to comply by 2000 and firms with less than twenty employees to comply by 2002).

¹⁵³ Ashta, *supra* note 133, at 3529.

¹⁵⁴ Askenazy, *supra* note 132, at 338.

¹⁵⁵ See Ashta, *supra* note 133, at 3527–29; Taylor, *supra* note 132, at 133–37; see also *Work Less, Recover Better? How a Shorter Working Week Answers Many Post-Pandemic Problems*, RAPID

working hours increases the need for workers, thus creating jobs.¹⁵⁶ “[I]t works because, rather than making workers redundant, firms are able to retain their workforce through sharing out available work by reducing the working week for all employees.”¹⁵⁷ Furthermore, shortening working hours increases leisure time, which in turn increases consumption of goods and services in the economy.¹⁵⁸ Individuals with continued employment and greater leisure time will increase aggregate demand for products; as demand for goods and services grows, the need for workers to produce such goods and services increases as well, creating jobs.¹⁵⁹ This economic rationale can also be applied to technological unemployment because “[t]he most probable effect [on the economy of a reduction of standard working hours] is that in a period of rapid technological change and rising productivity, it would minimize the likelihood of large-scale displacement of workers.”¹⁶⁰ As AI continues to grow and begins to replace jobs at unprecedented rates, shortening working hours can help distribute work to more people, making it an effective solution in minimizing AI job loss.¹⁶¹

B. *Current Circumstances Make a Shorter Work Week Attainable*

The idea of shortening the work week to combat job loss associated with AI is gaining traction in the media,¹⁶² but a shorter work week is not the only plan suggested for combating this impending technological unemployment.¹⁶³ Particularly since Andrew Yang’s 2020 presidential campaign, the idea of using universal basic income (UBI) to offset increased automation in the workforce has quickly gained support.¹⁶⁴ UBI is the idea that all citizens—regardless of need or income level—receive an

TRANSITION ALL. (Aug. 2, 2021), <https://perma.cc/S3TV-EGLX> [hereinafter *Work Less, Recover Better?*] (describing other instances in the Netherlands, Germany, and Utah where governments have implemented shorter work weeks to combat economic downturns).

¹⁵⁶ Nat Goldfinger, *Economic Aspects of Shorter Hours of Work*, 79 MONTHLY LAB. REV. 1274, 1274 (1956).

¹⁵⁷ *Work Less, Recover Better?*, *supra* note 155.

¹⁵⁸ Charles D. Stewart, *A Shorter Workweek as a Factor in Economic Growth*, 79 MONTHLY LAB. REV. 157, 157 (1956).

¹⁵⁹ Ashta, *supra* note 133, at 3527.

¹⁶⁰ Goldfinger, *supra* note 156, at 1274 (brackets in original).

¹⁶¹ *Otago University Research Looks to Four-Day Work Week for Businesses to Adapt to Increased Artificial Intelligence*, 1NEWS (May 25, 2021), <https://perma.cc/8F8Z-Z636>.

¹⁶² See, e.g., Michael Savage, *Rise of Robots ‘Could See Workers Enjoy Four-Day Weeks,’* THE GUARDIAN (Oct. 13, 2018, 12:02 EDT), <https://perma.cc/48NL-D9GX>.

¹⁶³ See Ben Bloch, *Tax Robots and Universal Basic Income*, TECHCRUNCH (July 17, 2018, 4:01 PM EDT), <https://perma.cc/6RWB-LG6Q> (discussing universal basic income and robot taxes as a means of offsetting AI job loss).

¹⁶⁴ See generally Kevin Roose, *His 2020 Campaign Message: The Robots Are Coming*, N.Y. TIMES (Feb. 10, 2018), <https://perma.cc/FCZ8-5LGF> (discussing Andrew Yang’s plan for UBI as part of his 2020 presidential campaign).

unconditioned amount of money on a regular basis.¹⁶⁵ Similar to the economic theories of leisure associated with shortening the work week, UBI is thought to increase spending power, productivity, and overall quality of life.¹⁶⁶ The issue with UBI, aside from the unrealistic cost and unnecessary payments to individuals who do not need supplemental income,¹⁶⁷ is that UBI is incompatible with a productive society.¹⁶⁸ Society is unlikely to give up on the belief that paid work is what entitles someone to economic security, and there are social and economic reasons to keep that mindset the societal norm: “Meaningful and productive work is worth much more to individuals and society than the income it generates.”¹⁶⁹ While progressive ideas like UBI can garner public support similar to that seen with the push for a four-day work week, such idealistic programs fall short of targeting the root issue: automation.¹⁷⁰ Rather than combating job loss through the creation of work opportunities, UBI discourages labor supply and treats displaced workers the same as any other member of society by giving the same amount of money to everyone, even those who remain unaffected by AI job loss.¹⁷¹

While UBI is not a realistic or attainable solution for AI job loss, the societal support for UBI and a shorter work week represent an important factor in implementing effective change: workers are desperate for better work-life balance.¹⁷² The mass shift to remote work sparked by the COVID-19 pandemic has given workers a taste of flexibility, and now more than ever, workers are realizing they do not want to work as many hours or as frequently as they did pre-COVID.¹⁷³ More importantly, the Great Resignation of workers triggered by the pandemic has created a labor shortage, which has increased workers’ bargaining power to demand more flexible work.¹⁷⁴ It is no surprise that companies like Microsoft Japan,

¹⁶⁵ June Javelosa, *Here’s Why the Answer to Increasing Automation Could Be Universal Basic Income*, FUTURISM (Jan. 1, 2017), <https://perma.cc/WS49-3P8V>.

¹⁶⁶ *Id.*

¹⁶⁷ Robert Greenstein, *Commentary: Universal Basic Income May Sound Attractive but, If It Occurred, Would Likelier Increase Poverty than Reduce It*, CTR. ON BUDGET & POL’Y PRIORITIES, <https://perma.cc/BX37-E8MD> (last updated June 13, 2019).

¹⁶⁸ See Cynthia Estlund, *Three Big Ideas for a Future of Less Work and a Three-Dimensional Alternative*, 82 LAW & CONTEMP. PROBS. 1, 16–17 (2019).

¹⁶⁹ *Id.*

¹⁷⁰ Melissa Kearney & Magne Mogstad, *The Math Is Clear: Universal Basic Income Is a Terrible Idea*, BUS. INSIDER (Nov. 23, 2019, 11:17 AM), <https://perma.cc/2MFX-FENG>.

¹⁷¹ *Id.*

¹⁷² Juliana Kaplan, *Almost 70% of Workers Want a Career Change. They’d Take Better Work-Life Balance over Higher Pay*, BUS. INSIDER (Aug. 16, 2021, 1:03 PM), <https://perma.cc/E3NM-24YE>.

¹⁷³ Daniel S. Hamermesh, *More Leisure, Less Work: Will the ‘COVID Revolution’ Last?*, THE HILL (Nov. 28, 2021, 10:30 AM EST), <https://perma.cc/6W5S-MZUH>.

¹⁷⁴ Robert Maxim et al., *Why the Pandemic’s Record-Breaking Quit Rates Are a Boon to Workers*, BROOKINGS (Jan. 12, 2022), <https://perma.cc/6U46-PTTE>.

Kickstarter, and Bolt are experimenting with and even permanently implementing shorter work weeks—the labor shortage has forced companies to give into the demands for flexible work as a means of retaining and recruiting employees.¹⁷⁵

While it may seem counterintuitive to focus on creating jobs during a labor shortage, the shortage of workers and supply chain issues associated with the pandemic have rapidly expanded the implementation of automation in the workplace.¹⁷⁶ Faced with both the need to cut costs and the need to produce goods without an adequate supply of workers, companies have been forced to invest in technology to replace human work.¹⁷⁷ AI was always set to replace jobs, but the pandemic greatly sped up this process.¹⁷⁸ The issue with this is that not all workers left the workforce for good; while many blame the labor shortage on the Great Resignation of early retirees, millions of workers who stopped working for reasons such as “long COVID” or childcare costs are set to return to the workforce.¹⁷⁹ Once these workers return, their jobs will no longer be there waiting for them, replaced by robots who cost less and are more efficient than human labor.¹⁸⁰

Throughout history, major social and economic events have acted as a catalyst for significant shifts in employment—the Great Depression sparked New Deal labor laws like minimum wage and overtime pay, and World War II brought women into the workforce to keep up with the demand for war supplies.¹⁸¹ The COVID-19 pandemic is set to act as a similar catalyst for

¹⁷⁵ Fox, *supra* note 99; Paul, *supra* note 94; Pinsker, *supra* note 98; see also *Workers Are Seeking Flexible Hours as Businesses Struggle with Worker Shortage*, FOX BUS. (Oct. 21, 2021, 7:17 AM EDT), <https://perma.cc/5V2Z-CFQZ> (explaining how employees are demanding more flexible schedules and even changing jobs to gain flexibility).

¹⁷⁶ Don Lee, *As COVID-19 Wanes, Employers Are Accelerating the Use of Robots. Where Does That Leave Workers?*, L.A. TIMES (May 4, 2021, 4:00 AM PT), <https://perma.cc/ZQ8R-85RV>.

¹⁷⁷ Jonathan Vanian, *The Pandemic Is Speeding up Automation, Putting Jobs in Question*, FORTUNE (Aug. 11, 2020, 12:07 PM EDT), <https://perma.cc/SL92-PX87>.

¹⁷⁸ Harry J. Holzer, *Automation, Jobs, and Wages: Should Workers Fear the New Automation?*, in *SHIFTING PARADIGMS: GROWTH, FINANCE, JOBS, AND INEQUALITY IN THE DIGITAL ECONOMY* 123, 124 (Zia Qureshi & Cheonsik Woo eds., 2022); Simon Chandler, *Coronavirus Is Forcing Companies to Speed up Automation, for Better and for Worse*, FORBES (May 12, 2020, 9:00 AM EDT), <https://perma.cc/BAL3-XU55>.

¹⁷⁹ *Economists on Worker Shortage: ‘They’ll Be Back’*, N.J. BUS. & INDUS. ASS’N (Dec. 17, 2021), <https://perma.cc/7BYQ-GLX6> (“Although the 1.5 million early retirees will not likely return, the 2.7 million workers disincentivized by enhanced jobless benefits will be back in the coming months as their savings diminish, and the 2.2 million labor force dropouts (mostly women) will also return by the end of 2022 if schools remain open and childcare is accessible.”); Aimee Picchi, *A Cause of America’s Labor Shortage: Millions with Long COVID*, CBS NEWS (Feb. 1, 2022, 7:41 AM), <https://perma.cc/K2QA-Z4PB>.

¹⁸⁰ See Alana Semuels, *Millions of Americans Have Lost Jobs in the Pandemic—And Robots and AI Are Replacing Them Faster Than Ever*, TIME (Aug. 6, 2020, 6:22 AM EDT), <https://perma.cc/8XFH-3TBL>.

¹⁸¹ See Hamermesh, *supra* note 173.

change, making now an ideal time to implement a plan to shorten the work week while similar employment shifts are already happening.¹⁸² Furthermore, the growing support for better work-life balance and flexibility means that the societal pressures that prompted historical changes in working hours have already paved the way to implement this change.¹⁸³ Sparked by the pandemic, increased automation of jobs and the push for greater flexibility in the workplace have created a perfect storm of change, making now the ideal time to begin implementing the shift to a shorter work week.¹⁸⁴

C. *A Cooperative and Targeted Approach Is Necessary for Effective Implementation*

Even if a shorter work week is the perfect solution to combat AI job loss, the question becomes how to implement such change—after all, attempts to permanently shorten the work week in the United States have transpired, and failed, in the past.¹⁸⁵ History has taught us that government mandates to shorten the work week do not work,¹⁸⁶ and recent legislative plans to shorten the work week to thirty-two hours have died in Congress.¹⁸⁷ Yet history has also taught us that certain methods of shortening the work week are successful, such as the President’s Reemployment Agreement during the Great Depression and the Aubry Acts in France.¹⁸⁸ A shorter work week may seem idealistic, but if implementation is transitional and matches the rate at which AI takes over, AI could end up paving the way for a permanent switch to a shorter work week.¹⁸⁹

1. *A Public-Private Approach Would Balance the Desire to Encourage Innovation Against the Need to Protect Workers*

Both the government and businesses agree that encouraging innovation of AI is important to overall progress.¹⁹⁰ As a result, government funding for

¹⁸² See Hamermesh, *supra* note 173.

¹⁸³ See Bryan Lufkin & Jessica Mudditt, *The Case for a Shorter Workweek*, BBC (Aug. 24, 2021), <https://perma.cc/6829-QHHC>.

¹⁸⁴ See *COVID-19 Pandemic Is the ‘Perfect Excuse to Adopt Four-Day Work Week’*, EURONEWS, <https://perma.cc/556X-RVRB> (last updated May 29, 2020).

¹⁸⁵ See Robert Whaples, *Hours of Work in U.S. History*, EH.NET, <https://perma.cc/5YZE-R2MZ> (last updated Aug. 14, 2001).

¹⁸⁶ Brockell, *supra* note 80 (describing the failure of the thirty-hour work week bill during the Great Depression due to push back from businesses).

¹⁸⁷ *H.R. 4728: Thirty-Two Hour Workweek Act*, *supra* note 103.

¹⁸⁸ See Ashta, *supra* note 133, at 3527–29; Askenazy, *supra* note 132, at 323–25.

¹⁸⁹ See Crane, *supra* note 119.

¹⁹⁰ See NAT’L SCI. & TECH. COUNCIL, *supra* note 56, at 16; Julia Hood, *Companies Continue to Prioritize AI and Cloud for Innovation Investment, According to the Latest Transforming Business Poll*, BUS. INSIDER (Apr. 20, 2021, 6:07 PM), <https://perma.cc/DW8T-ZH65>.

the research and development of AI is continually increasing,¹⁹¹ and companies are rapidly investing in AI technologies.¹⁹² While encouraging innovation is important, equally important is the development of policy to protect workers and minimize the risks of AI.¹⁹³ To this extent, government regulation of AI is necessary to minimize job loss without inhibiting innovation.¹⁹⁴ A policy aimed at shortening the work week would play a significant role in minimizing the negative impact of AI innovation, but in a capitalistic society big businesses have significant power in government action.¹⁹⁵ In fact, this power and push back from businesses is the exact reason why government regulation of a shorter work week failed during the Great Depression.¹⁹⁶ An effective plan to shorten the work week requires a public-private initiative focused on incentivizing compliance with shorter working hours rather than mandating compliance.¹⁹⁷

An effective public-private approach for shortening the work week would look similar to the adoption of the Robien and Aubry laws in France.¹⁹⁸ To achieve voluntary compliance from businesses, France created an incentive-based program where businesses would earn a tax break for reducing hours worked.¹⁹⁹ In addition to requiring a minimum percentage of hour reduction, France also required a simultaneous increase in job creation within the business, thus forcing companies to hire more individuals rather than cutting costs and workers.²⁰⁰ These tax breaks make sense—when unemployment rates are high, government spending (funded by taxes) increases as payments for unemployment benefits, food assistance,

¹⁹¹ See SUBCOMM. ON NETWORKING & INFO. TECH. RSCH. & DEV. ET AL., THE NETWORKING & INFORMATION TECHNOLOGY R&D PROGRAM AND THE NATIONAL ARTIFICIAL INTELLIGENCE INITIATIVE OFFICE: SUPPLEMENT TO THE PRESIDENT'S FY2022 BUDGET 13, 18 (2021), <https://perma.cc/KY5D-RUUQ>.

¹⁹² See Joe McKendrick, *AI Adoption Skyrocketed over the Last 18 Months*, HARV. BUS. REV. (Sept. 27, 2021), <https://perma.cc/5YX9-SGEX>.

¹⁹³ PETER ENGELKE, AI, SOCIETY, AND GOVERNANCE: AN INTRODUCTION 1–2 (Mar. 2020), <https://perma.cc/3FYA-DAA2>.

¹⁹⁴ See Matthew Fenech, *AI and Jobs: 4 Key Steps Governments Can Take to Limit Job Displacement*, ITU (Apr. 29, 2020), <https://perma.cc/8QL3-V4R9>.

¹⁹⁵ See Lee Drutman, *How Corporate Lobbyists Conquered American Democracy*, THE ATL. (Apr. 20, 2015), <https://perma.cc/U7NA-4SGP> (describing how businesses use lobbying to gain power in Congress).

¹⁹⁶ Brockell, *supra* note 80.

¹⁹⁷ Compare Taylor, *supra* note 132, at 133–37 (describing how the President's Reemployment Agreement was successful in incentivizing businesses to voluntarily reduce working hours during the Great Depression), with Brockell, *supra* note 80 (describing how the plan for mandating a shorter work week during the Great Depression failed due to pushback from businesses).

¹⁹⁸ See Askenazy, *supra* note 132, at 325.

¹⁹⁹ Askenazy, *supra* note 132, at 325.

²⁰⁰ Ashta, *supra* note 133, at 3528.

and various other welfare increase as well.²⁰¹ The proposed tax breaks would be partly “self-financing” through the resulting positive effects on employment and government spending.²⁰² Additionally, the government finances unemployment benefits through an unemployment insurance tax on businesses, so the businesses that create jobs and reduce unemployment would, effectively, be paying a lower unemployment insurance tax.²⁰³ Much like France’s program, these tax breaks are not necessarily permanent but rather designed to incentivize companies to institute change by redirecting governmental cost savings back onto the company for a temporary period of time.²⁰⁴

Government tax breaks would highly incentivize businesses to reduce working hours, especially since companies have already started to switch to a four-day work week without such incentives.²⁰⁵ Additionally, businesses would retain the numerous other benefits associated with a shorter work week, including cost-saving benefits, productivity gains, and even environmental benefits.²⁰⁶ Much like past social movements, society has already started to shift in the direction of more flexible work, and the government can help push society in the right direction by further incentivizing voluntary change.²⁰⁷ According to Medeiros, “[p]ublic-private collaboration is essential to creating innovative governance solutions that can be adapted as the technology develops.”²⁰⁸ By incentivizing a shorter work week rather than mandating that companies reduce their hours, the government can work together with businesses to encourage AI innovation while protecting workers from the negative consequences of AI job loss.²⁰⁹

2. Gradual Implementation Would Minimize Push Back and Maximize Effectiveness

In addition to increasing private-sector support for a shorter work week,

²⁰¹ See Stephen D. Simpson, *The Cost of Unemployment to the Economy*, INVESTOPEDIA, <https://perma.cc/6CXC-HQVC> (last updated Apr. 14, 2022).

²⁰² Ludger Linnemann, *Unemployment, Government Spending and the Laffer Effect*, 31 FISCAL STUD. 227, 227–28 (2010).

²⁰³ See generally *Unemployment Insurance Tax Topic*, U.S. DEP’T. LAB. (Mar. 29, 2004), <https://perma.cc/RN7S-WCCQ> (explaining how unemployment insurance works).

²⁰⁴ See Askenazy, *supra* note 132, at 325 (noting that the Robien Law would only cut social insurance contributions for seven years).

²⁰⁵ See O’Loughlin, *supra* note 100.

²⁰⁶ See Lombardo, *supra* note 122.

²⁰⁷ See Joy Burnford, *Flexible Working: The Way of the Future*, FORBES (May 28, 2019, 10:06 AM EDT), <https://perma.cc/LZ9S-3ZQX>.

²⁰⁸ Maya Medeiros, *Public and Private Dimensions of AI Technology and Security*, in CTR. FOR INT’L GOVERNANCE & INNOVATION 20, 21 (2020), <https://perma.cc/5P84-M67S>.

²⁰⁹ See *id.* at 23 (noting that a joint effort between private companies and the government is necessary to develop effective AI policy).

incentivizing rather than mandating businesses to reduce working hours helps spread out implementation, which could minimize the negative effects of such a policy.²¹⁰ Critics of a four-day work week have suggested that shortening the work week with a sudden mandate could weaken industry by increasing the cost of labor.²¹¹ However, gradual implementation can accomplish widespread change without these negative effects by slowly transitioning to a shorter work week as the norm: “Changing norms among prominent private firms may eventually lead to a broader transition to a four-day week, . . . much as Henry Ford helped popularize the 40-hour week in the 1920s.”²¹²

Even though initial steps in implementing a shorter work week should focus on incentivizing rather than mandating, this does not necessarily mean that the government could never attempt to achieve universal compliance through the use of mandates.²¹³ In fact, the government should lead the movement and set an example by instituting a shorter work week for public employees—much like President Grant did in 1869 when he set an eight-hour workday for all government workers.²¹⁴ Once a shorter work week becomes the norm in society, the government could, and should, amend the FLSA by requiring overtime compensation for hours worked over the new norm (most likely thirty-two hours given the push for the four-day work week).²¹⁵ This gradual implementation mimics many of the successful labor movements from the past: a push from individuals demanding better rights, companies giving into pressure from workers, and the government stepping in at the end to ensure all workers receive these benefits once they become the norm.²¹⁶

3. Targeting Certain Industries Would Ensure That the Most-Affected Individuals Receive the Benefits of a Shorter Work Week

Gradual implementation of a shorter work week would also allow for a more targeted approach in combating AI job loss by focusing on industries most affected by artificial intelligence.²¹⁷ The government is no stranger to

²¹⁰ See Jeff Stein, *Thank God It's Thursday: The Four-Day Workweek Some Want to Bring to the U.S.*, WASH. POST (July 11, 2019, 8:04 AM EDT), <https://perma.cc/C8ST-JLP6>.

²¹¹ *Id.*

²¹² *Id.*

²¹³ See Ashta, *supra* note 133, at 3528 (explaining how France initially sought voluntary compliance through tax incentives but eventually mandated a thirty-five-hour work week).

²¹⁴ *E.g.*, Lebowitz & Ward, *supra* note 83.

²¹⁵ Thirty-Two Hour Workweek Act, H.R. 4728, 117th Cong. § 2(1)(A) (2021).

²¹⁶ See Lebowitz & Ward, *supra* note 83 (describing the history of the five-day work week, from demands of labor unions to the eventual adoption of the FLSA).

²¹⁷ See generally Sintia Radu, *Top Industries to Be Changed by Automation*, U.S. NEWS (Nov. 7, 2018, 1:01 PM), <https://perma.cc/SM9N-7K9Y> (listing the top five industries that will be affected

targeting government benefits towards specific types of businesses or industries; when the COVID-19 pandemic devastated the economy, the government spent billions of dollars bailing out the airline industry alone due to the unique impact the pandemic had on air travel.²¹⁸ In the realm of AI, manufacturing, food service, and retail jobs all have a high risk of automation, and governmental incentive programs could reflect this increased impact on these industries by giving greater incentives to shorten the work week and create jobs in the industries most affected.²¹⁹ Targeting certain industries would increase demand for workers in that particular industry and would ensure that those impacted by AI job loss would reap the benefits of a shorter work week.²²⁰

IV. As Companies Begin to Shorten the Work Week, the Legislature Should Adopt a Comprehensive Legislative Framework to Support Workers Most Affected by AI

A. Implementing a Shorter Work Week to Combat AI Job Loss Would Affect Workers Differently

On a macroeconomic level, a shorter work week would decrease unemployment caused by increased automation in the workforce through the creation of jobs, spreading out the economic burden of displaced workers.²²¹ However, as critics have pointed out, a broad plan to shorten the work week does not solve every problem associated with AI job loss and can even worsen existing inequalities.²²² Shortening the work week to minimize AI job loss will inevitably affect certain workers more than others, and it is important to recognize the shortcomings of this solution to figure out how the government can step in to support those workers through a comprehensive legislative framework that complements the transition to a shorter work week.²²³

by increased automation in the workforce).

²¹⁸ Jae Woon Lee, *Government Bailouts of Airlines in the COVID-19 Crisis: Improving Transparency in International Air Transport*, 24 J. INT'L ECON. L. 703, 710–12 (2021).

²¹⁹ See Radu, *supra* note 217.

²²⁰ See Goldfinger, *supra* note 156, at 1274 (noting that reducing working hours would minimize worker displacement from technology).

²²¹ See Goldfinger, *supra* note 156, at 1274.

²²² Estlund, *supra* note 168, at 32; Jake Shepherd, *Without Careful Design, a Four-Day Work Week Could Make Inequality Worse*, INDEP. (July 15, 2021, 10:00 AM), <https://perma.cc/T2X7-QBZZ>

²²³ See Allana Akhtar & Caroline Hroncich, *Finland's New Millennial Leader Wants Her Country to Have a Four-Day Workweek. Here's Why the Wildly Beloved Schedule Would Never Work in the U.S.*, BUS. INSIDER (Jan. 6, 2020, 12:12 PM), <https://perma.cc/BS82-XQMW> (noting that certain forms of workers could be excluded from the benefits of a four-day work week); Peter Dizikes, *Study Finds Stronger Links Between Automation and Inequality*, MIT NEWS (May 5, 2020), <https://perma.cc/V45B-QEYF> (finding that automation displaces jobs at different rates, increasing inequalities).

1. AI Has a Disproportionate Impact on “Low-Skill” Workers

Ever since the 1970s, the wealth gap between the rich and the poor has accelerated at astonishing rates.²²⁴ On average, over half of increases in national income went to the wealthiest 1% each year, and in the aftermath of the 2008 recession, the top 1% accounted for 95% of total income gains.²²⁵ Even if overall jobs increase and help offset unemployment caused by automation, these jobs tend to require greater skill and education than the displaced workers possess.²²⁶ In fact, “automation technology has been the primary driver in U.S. income inequality over the past 40 years.”²²⁷ AI tends to benefit high-skill, high-income workers at the direct expense of low-skill workers,²²⁸ and while gradual implementation of a shorter work week may slow this process down, eventually these highly automated jobs will disappear entirely.²²⁹

Low skill appears to be the most dominant factor in assessing which workers AI will displace, but automation also affects individuals with lower education levels at greater rates than individuals with advanced degrees.²³⁰ Individuals with lower education levels have a significantly higher risk of automation in their jobs than those workers with higher education levels.²³¹ Furthermore, as AI’s capability develops to include decision-making abilities, the risk of automation spreads to affect even more workers—future predictions of AI job loss include both low-skill workers and mid-skill workers as highly displaced individuals rather than the traditional low-skill worker prediction.²³² AI job loss has a greater impact on individuals who have lower skill and education levels, and solutions to this problem must target those individuals to effectively minimize the negative impacts of artificial intelligence.²³³

²²⁴ FORD, *supra* note 52, at 46.

²²⁵ FORD, *supra* note 52, at 46.

²²⁶ Seymour L. Wolfbein, *Automation and Skill*, 340 ANNALS AM. ACAD. POL. & SOC. SCI. 53, 53 (1962).

²²⁷ Jack Kelly, *Artificial Intelligence Has Caused a 50% to 70% Decrease in Wages—Creating Income Inequality and Threatening Millions of Jobs*, FORBES (June 18, 2021, 10:34 AM EDT), <https://perma.cc/6Q6Z-XHNV>.

²²⁸ Dizikes, *supra* note 223.

²²⁹ See G. Dautovic, *Automation and Job Loss Statistics: The Robots Are Coming*, FORTUNLY, <https://perma.cc/8MGD-KKDG> (last updated Mar. 7, 2022).

²³⁰ JOHN HAWKSWORTH, RICHARD BERRIMAN & SALONI GOEL, WILL ROBOTS REALLY STEAL OUR JOBS? AN INTERNATIONAL ANALYSIS OF THE POTENTIAL LONG TERM IMPACT OF AUTOMATION 27 (2018), <https://perma.cc/KS2T-DV53>.

²³¹ *Id.* (noting that the risk of automation for individuals with low education levels is 44% compared to the 11% risk for high education levels).

²³² See Georgios Petropoulos & Sybrand Brekelmans, *Artificial Intelligence’s Great Impact on Low and Middle-Skilled Jobs*, BRUEGAL (June 29, 2020), <https://perma.cc/XE6B-8BG>.

²³³ See Jocelyn Maclure & David Rocheleau-Houle, *Will Artificial Intelligence Lead to More*

2. Shortening the Work Week Looks Different for Different Types of Workers

Another critique of a shorter work week is that not all workers will benefit from reduced working hours, particularly wage workers.²³⁴ This argument stems from the notion that low-wage workers do not earn enough working five days a week (sometimes even more), and cutting hours would make these workers earn even less.²³⁵ This is a valid concern when combined with the fact that AI will displace these same low-wage workers at greater rates.²³⁶ However, efforts to reduce working hours without lowering weekly wages have worked in the past—in 1914 and again in 1926, Ford Motor Company reduced weekly hours while giving those same workers pay raises.²³⁷ In fact, nearly every successful attempt to shorten the work week so far has kept take-home pay the same.²³⁸ Nevertheless, the potential effect on wage workers reiterates the importance for legislators to consider these consequences when developing policy, particularly since the only federal legislation proposed thus far fails to mention any wage or salary protections.²³⁹

B. *A Supportive Legislative Framework Would Minimize AI's Disproportionate Effect on Certain Workers*

A policy to reduce working hours that focuses on voluntary compliance rather than strict mandates requires legislative action to protect workers and mitigate risks.²⁴⁰ While AI has the potential to cause wealth inequality, a standalone policy to reduce inequality has potential shortcomings that could minimize such policy's effectiveness.²⁴¹ A supportive legislative framework that accounts for these potential shortcomings, such as the disproportional impact on certain workers, would ensure that every worker benefits from

Unfairness?, POL'Y OPTIONS POLITIQUES (Sept. 23, 2021), <https://perma.cc/5Q7K-NNVP>.

²³⁴ Akhtar & Hroncich, *supra* note 223.

²³⁵ Akhtar & Hroncich, *supra* note 223.

²³⁶ See R. Maria del Rio-Chanona et al., *Occupational Mobility and Automation: A Data-Driven Network Model*, 18 J. ROYAL SOC'Y INTERFACE, Jan. 2021, at 1, 1.

²³⁷ Brockell, *supra* note 80; *Ford Factory Workers Get 40-Hour Week*, HIST., <https://perma.cc/G93Q-KVBA> (last updated Apr. 29, 2020).

²³⁸ See, e.g., *Four-Day Week 'an Overwhelming Success' in Iceland*, BBC (July 6, 2021), <https://perma.cc/95DR-ENZY> (noting Iceland's success in shortening the work week while keeping pay the same); Guillermo Vega, *How Two Companies in Spain Moved to a Four-Day Week Without Cutting Salaries*, EL PAIS (Jan. 20, 2022, 6:42 AM EST), <https://perma.cc/M89W-UJJW> (describing Spain's new four-day work week policy, which grants subsidies for companies who implement a four-day work week without pay reductions).

²³⁹ Thirty-Two Hour Workweek Act, H.R. 4728, 117th Cong. (2021).

²⁴⁰ See Medeiros, *supra* note 208.

²⁴¹ See Maclure & Rocheleau-Houle, *supra* note 233.

the shorter work week movement.²⁴²

1. Job Retraining Legislation Would Provide Opportunities to Workers Displaced by AI

AI will affect everyone, but the shift to increased automation in the workforce will affect individuals with low-skill jobs and less education at greater rates.²⁴³ Given AI's potential to completely eliminate these jobs, supportive legislative measures must include policy aimed at assisting these displaced workers in finding new job opportunities.²⁴⁴ One way to accomplish this is through legislation that helps reeducate and retrain individuals who lose their jobs to AI.²⁴⁵ Current predictions estimate that 70% of displaced workers will have to retrain for a new career.²⁴⁶ The solution to this is already in Congress's control: amending the Trade Adjustment Assistance Program (TAA).²⁴⁷

Congress created the TAA in 1962 as part of the Trade Expansion Act.²⁴⁸ The purpose of the program was to provide funding for training and reemployment services to workers who lost their jobs to foreign competition.²⁴⁹ The historical background of the TAA is analogous to the current AI job displacement narrative; the United States' decision to lower trade barriers was beneficial for economic progress—much like AI innovation—but doing so resulted in jobs moving abroad at the expense of American workers.²⁵⁰ Since 1962, Congress has amended and reauthorized the TAA to meet the needs of society, and Congress should once again amend the TAA to create an avenue for workers displaced by AI and give them similar retraining and education benefits.²⁵¹

In 2019, four senators introduced the idea of amending the TAA to

²⁴² See Andrew Stettner, *How to Respond to Job Losses from Technology, Trade, and Policy Choices*, CENTURY FOUND. (Oct. 1, 2019), <https://perma.cc/2KCH-UN8U>.

²⁴³ See Maclure & Rocheleau-Houle, *supra* note 233.

²⁴⁴ See Stettner, *supra* note 242.

²⁴⁵ See Pedro Nicolaci da Costa, *We've Been Worried About Technology Stealing Jobs for 200 Years but One Solution Is Plain to See*, BUS. INSIDER (July 17, 2017, 9:33 AM), <https://perma.cc/6TJZ-4L6V>.

²⁴⁶ Jamie Condliffe, *Retraining Could Help Most People Avoid Job Loss at the Hands of Automation*, MIT TECH. REV. (Jan. 22, 2018), <https://perma.cc/4NJ7-PZX3>.

²⁴⁷ See generally CONG. RSCH. SERV., R44153: TRADE ADJUSTMENT ASSISTANCE FOR WORKERS AND THE TAA REAUTHORIZATION ACT OF 2015, at 1 (2021), <https://perma.cc/HE7D-YZ23> (describing the purpose and history of the TAA).

²⁴⁸ Katherine Baicker & M. Marit Rehavi, *Policy Watch: Trade Adjustment Assistance*, 18 J. ECON. PERSPS. 239, 240 (2004), <https://perma.cc/V47X-YW6T>.

²⁴⁹ CONG. RSCH. SERV., *supra* note 247, at 1.

²⁵⁰ See OFF. TECH. ASSESSMENT, TRADE ADJUSTMENT ASSISTANCE: NEW IDEAS FOR AN OLD PROGRAM 13 (1987), <https://perma.cc/4M5Q-LYAJ>.

²⁵¹ See Baicker & Rehavi, *supra* note 248, at 240–45.

minimize the threat of AI.²⁵² The TAA for Automation Act aimed to provide TAA benefits for workers displaced by automation by helping these workers gain the skills and training necessary for jobs of the future.²⁵³ Unfortunately, the TAA for Automation Act did not receive a vote and ultimately failed in the Senate, but the support for such a policy did not die with the bill.²⁵⁴ Day One Project, a group dedicated to creating actionable policies in the field of science and technology,²⁵⁵ recently urged the Biden-Harris administration to amend the TAA to assist workers displaced by technological advancements.²⁵⁶ The group recommended a three-step plan, known as the Trade and Technology Adjustment Assistance Plan, to expand the TAA to include (1) a centralized infrastructure to administer an amendment, (2) an upskilling platform focused on in-demand jobs, and (3) a fund for temporary worker assistance.²⁵⁷ Even if past legislation ultimately failed, amending the TAA would provide the means to support workers displaced by AI in a way that complements the macroeconomic policy to reduce unemployment through the implementation of a shorter work week.²⁵⁸

2. Protecting Pay Would Further Help Minimize the Wage Gap and Ensure Equality

While amending the TAA would complement a policy to shorten the work week, no legislative plan discussed thus far would protect workers from an employer using reduced working hours as a way to reduce pay.²⁵⁹ Some companies may not be able to afford to pay workers the same amount for fewer hours worked, and others may simply refuse to do so due to lower profit margins (particularly in situations where companies must increase hourly wages, but overall hours worked across the company cannot be cut).²⁶⁰ Reducing pay is a significant challenge to the effectiveness of a shorter work week because many of the benefits of a shorter work week would be reduced or even eliminated without pay protections in place.²⁶¹

The gradual implementation and timing of reducing working hours

²⁵² TAA for Automation Act of 2019, S. 3034, 116th Cong. (2019).

²⁵³ *Id.*

²⁵⁴ S. 3034 (116th): TAA for Automation Act of 2019, GOVTRACK, <https://perma.cc/4KN6-N4M5> (last visited Apr. 25, 2023).

²⁵⁵ *About Us*, DAY ONE PROJECT, <https://perma.cc/Z6DK-GPEW> (last visited Apr. 25, 2023).

²⁵⁶ LEXI CURNIN ET AL., MAKING THE TRADE ADJUSTMENT ASSISTANCE PROGRAM WORK FOR THE NEW ECONOMY, DAY ONE PROJECT 2 (2021), <https://perma.cc/9DYM-MPXY>.

²⁵⁷ *Id.* at 4–5.

²⁵⁸ *See id.* at 2–5.

²⁵⁹ *See* Heidi Lynne Kurter, *Is Thursday the New Friday? 3 Pros and Cons of Reducing Working Hours*, FORBES (Dec. 30, 2021, 5:46 PM EST), <https://perma.cc/GA3F-MH5L>.

²⁶⁰ *Id.*

²⁶¹ *See* Stewart, *supra* note 158, at 157 (describing the economic benefits of increased consumption associated with leisure time).

helps make the cost of salary stays and wage increases more realistic; for most companies, reducing hours while keeping pay the same will actually result in cost reductions to the company due to increased productivity and decreased overhead.²⁶² These cost-benefits, combined with government incentives and improvements in employee morale, mean that companies will want to switch to a four-day work week (like many already are).²⁶³ Once the first phase—centered upon voluntary reduction of working hours through government incentives—meets with success in reducing the average number of working hours, the government should step in to mandate and regulate universal compliance through amending the FLSA.²⁶⁴ In addition to gradually reducing hours worked (through overtime payments), the legislation should include gradual increases to the minimum wage, a legislative framework that mimics the adoption of the FLSA in 1938.²⁶⁵ The societal demand for increasing minimum wage already exists for a number of reasons, but including wage increases in a comprehensive legislative plan is necessary to maximize the effectiveness of a shorter work week in combating AI job loss.²⁶⁶

CONCLUSION

In a world where the only chauffeur you need is Elon Musk, it is easy to see how robots are the way of the future. The development of artificial intelligence accelerates each day as the fear of a robot revolution echoes throughout society. The rise of AI in the workforce will destroy many jobs, but AI does not have to destroy society too. Shortening the work week has proven effective in creating jobs, and current societal pressure for more flexible work makes now the ideal time to begin implementing such change. First, the government must work together with companies in a voluntary transition to a shorter work week. Once the societal norm has shifted away from a rigid forty-hour week, the legislature must step in and create a comprehensive plan to protect workers and promote equality, targeting workers most affected by AI job loss. Change does not happen at once, but

²⁶² Miriam Marra, *Economics of a Four-Day Working Week: Research Shows It Can Save Businesses Money*, THE CONVERSATION (Nov. 11, 2019, 12:01 EST), <https://perma.cc/VB5H-GAGF>.

²⁶³ See Kylie Logan, *A CEO Who Implemented a 4-Day Workweek in July Says Her Company 'Will Never Go Back.' It Boosted Revenue and Morale*, FORTUNE (Dec. 1, 2021, 12:43 PM EST), <https://perma.cc/VRQ8-9K5U>.

²⁶⁴ See TAA for Automation Act of 2019, S. 3034, 116th Cong. (2019).

²⁶⁵ See Alfred B. Robinson, Jr., *The FLSA After 80 Years, Part II: Eight Decades of the Fair Labor Standards Act*, OGLETREE DEAKINS (July 3, 2018), <https://perma.cc/TS4M-BPDM> (noting that the FLSA of 1938 provided a gradual increase of minimum wage from twenty-five cents to forty cents over three years).

²⁶⁶ See DAVID COOPER ET AL., RAISING THE FEDERAL MINIMUM WAGE TO \$15 BY 2025 WOULD LIFT THE PAY OF 32 MILLION WORKERS (2021), <https://perma.cc/TK7W-GWDP> (outlining the many reasons why increasing minimum wage would benefit society).

using a shorter work week to minimize the negative impacts of AI allows this change to happen with a purpose. Yes, the robots are coming—but instead of fearing robots taking our jobs, what if we let them?