MGA 60764/Econ 40410/GLAF 40105/TEC 40204/KSGA 40408/CDT 40711
Future of Labor

Prof. Yong Suk Lee
yong.s.lee@nd.edu
Course meets 2X per week (75-minute class periods)

Course Description
The new wave of technologies, e.g., robotics and AI will have long-lasting impacts on the labor market. Jobs will be displaced, new tasks will be created, different skills will be demanded, and new management practices will emerge. These new technologies may benefit workers unevenly, potentially increasing inequality. At the same time, new demographic challenges driven by aging will have large impacts on labor. How will these forces affect the future of labor and how should we prepare for changes in the labor market?

The goal of this course is to provide students with a framework for analyzing how new technologies like robotics and AI will affect the labor market drawing largely from the economics literature. Students will analyze and describe the literature on these topics and understand the different methodologies used in the literature. Ultimately, students will build perspectives on how AI and robotics could affect jobs, occupations, the future of work, income distribution and social institutions. Students will also build perspectives on education, training, and redistribution policies that can help mitigate the labor market disruptions created by technological change. Students will collect and analyze data that can provide insights on the future of labor.

Prerequisites
The first-year statistics/econometrics sequence should suffice for MGA students. For Economics students Econometrics is a prerequisite. For other students, similar courses in other departments that cover linear regression may substitute as prerequisites. I will review regression concepts, but I expect students to have a basic understanding of regression analysis.

Course Requirements and Evaluation
Grades will be determined by the following formula. You must complete **all** assignments by the due date to get a passing grade, i.e., *you may **not** strategically choose to skip an assignment*.

Class participation	15%
Response papers (2)	16%
Data analysis and short report (1)	15%
Final project	54%
-Proposal	(12%)
-Initial draft	(10%)
-Presentation	(12%)
-Final Short Paper	(20%)

Class participation: Students are expected to attend class every day and participate in discussions. This part of your grade will be determined by your engagement with the course material and your peers, including attendance, reading of the assigned material before class, and constructive contributions.

Class attendance is mandatory. If you have to miss class you must inform me ahead of time to be excused. Unexcused absence will negatively affect your class participation points. More than 3 unexcused absences will result in a zero for your participation grade. Again, if you need to miss class due to an extenuating circumstance, *email me before class to let me know.* Everyone is expected to present during the mini-conference, the two classes when students present their research.

Response papers: Students will complete two short reading response papers of about two double-spaced pages, each reflecting on assigned readings for the upcoming class. You may choose any date that fits your interest and schedule, as long as one is written for a class before Spring break and the other for a class after Spring break. Response papers are due by submission to Canvas under "Assignments" by 10:00 a.m. the day of the relevant class. You will sign up for the dates of your two responses in a survey I will circulate after the first week. These reading responses should:

1. *Briefly* summarize the major points/ideas/concerns of the readings for the day (no more than a paragraph),
2. Draw connections to other course materials, apply the ideas raised in the readings to real-world applications of interest to you, or unpack any arguments that you found stimulating or challenging, AND
3. Conclude with two discussion questions for the class.

Data analysis and report: There will be an assignment where you will analyze data and write a brief report related to the future of labor. These are datasets that were used in papers that we cover in the earlier parts of the course. I will provide a couple of data sets and you can choose one to examine. Students will write a short report, between 800 and 1,000 words, on how the data were collected, the descriptive patterns you examined using the dataset, any limitations of this dataset, and suggestions for improvement. Information about the datasets and assignment will be distributed in the third week of class.

Research Paper
Individual or group project: A substantial portion of the course will be the research project. You can do the research project on your own or as a group of 2 to 3 people. If you do want to do a group project, you can form your own groups and let me know. Otherwise, I will form groups based on the topics the students are interested in.

Research Project
The hallmark of the course is your research project. Students will work in groups of 2 to 3 people. The research project involves writing a short proposal, giving a short class presentation, and writing a final paper on a specific topic related to labor. The paper must have an empirical component, i.e., some empirical evidence and/or data analysis that can back up your main

arguments. I will offer a few datasets which you can choose from but feel free to choose your own research question and dataset.

Initial idea submission: Early on in the semester, individual students or groups (if doing a group project) should get together to discuss potential research topics. Ideally, having conducted some preliminary research, each individual/group should converge on one or two (or three at most) research questions. You will share the potential research questions with me and I will provide feedback so that you may decide which one would be most appropriate and feasible for the class.

Proposal: The main goal of the research proposal is to come up with an interesting research question. Finding a question interesting to you and convincing others that the question is interesting is the first step towards good research, and is quite difficult. You will need to search for articles, review the literature, and refine the question many times. I encourage each of you to think about a question as early on as possible in the course. I will distribute a guideline on how to write the research proposal.

Initial draft: The main goal of the initial draft is to put you on track to produce a strong research paper. At this point you should have worked on the empirical analysis and have decided on the key findings and narrative of your research paper. The initial draft should coherently explain your motivation research, research question, literature, and present some empirical analysis. This draft can actually be longer than the final draft. At the minimum you should aim for about 60 to 70% of the final word count.

Presentation (Mini-conference): There will be an in class mini-conference where you will present your research. The presentations will be around 15 minutes and will form the basis of your final paper. I will provide guidelines on the structure of the presentation. *How well and clearly you convey your findings, as well as, how well you provide constructive feedback to someone else's presentation will be important*.

Final Paper: The final short paper is a write-up of your research that closely follows the outline of your presentation. It should be less than 2,000 words (main text excluding reference), with a maximum of five exhibits (figures or tables).

Late policy
All assignments must be submitted on time. Late work will be penalized by 15% each day. To be fair to all students, work submitted more than 2 days late will not be accepted. I may grant extensions to students who face extenuating circumstances, such as health or family emergencies. When those situations come up, I ask that you please get in touch with me as soon as possible.

Course Policies

Mutual respect and privacy: In this course, we will encounter a variety important debates pertaining to the use and impacts of technologies. Some may touch on contentious subjects and/or spotlight harms that may be especially concentrated within certain communities. I expect students to engage with each other's perspectives respectfully and constructively. I hope that discussions will be rigorous, but also ask that we work together to build an inclusive classroom environment.

In the interest of creating a comfortable environment for sharing questions, ideas, and experiences in class discussions, I also ask that you not make any digital recordings (audio, photographic, or video) of others without their consent during class time. I also request that you please check in with me before sharing any course materials with others outside of this class.

Classroom behavior: Coming late to class or leaving the class during the lectures will disturb the instructor and all your fellow classmates. Please be on time and be respectful for everyone.

Digital Device: Do not bring laptops to class, and you must silence your phones or other devices.

Covid-19 accommodations and policies: The Covid-19 pandemic has presented challenges and disruptions for many. If you are experiencing any issues — be it physical, mental/emotional, or personal — that interfere with your ability to participate fully in this class, please get in touch with me. I will work with you to figure out a plan to help you succeed in this course. In regards to masking and Covid related policies, we will follow university guidelines. However, you should feel comfortable to wear masks if you prefer to or wish to take additional precaution for each other and the community.

Honesty & intellectual integrity: Notre Dame students are expected to abide by the Academic Code of Honor Pledge. The Pledge and student guide are available at: http://honorcode.nd.edu. It is the University's expectation that students be aware of and meet the expectations expressed in this policy. Please reach out to me if you have questions about how the Honor Pledge pertains to assigned work or required elements for this course.

Disability and accommodation: It is the policy and practice of The University of Notre Dame to provide reasonable accommodations for students with properly documented disabilities. Students who have questions about Sara Bea Accessibility Services or who have, or think they may have, a disability are invited to contact Sara Bea Accessibility Services for a confidential discussion in the Sara Bea Center or by phone at 574-631-7157. Because the University's Academic Accommodations Processes generally require students to request accommodations in advance of the dates when they are needed, students who believe they may need an accommodation for this course are encouraged to contact Sara Bea Accessibility Services at their earliest opportunity. Additional information about Sara Bea Accessibility Services and the process for requesting accommodations can be found at supportandcare.nd.edu/.

Course Schedule Outline

No	Content
1	Course Introduction
2	Declining Labor Share
3	Rising Inequality
4	Will New Technologies Erode Labor? Historical perspective
5	Econometrics Review
6	The Impact of Robots on Jobs
7	Evolving and Varied Impact of Robots on Jobs
8	Automation, Tasks, and Labor: Theoretical considerations
9	Machine learning primer. (Online class)
10	Predicting the Impact of AI/ML on jobs 1
11	Predicting the Impact of AI/ML on jobs 2
12	AI in Healthcare
13	AI in Finance
14	Algorithms and Human Decision
15	Roundtable - proposal
	Midterm Break
16	Management and Algorithms
17	Entrepreneurship and the Direction of Innovation
18	New Work
19	Future Skills: which skills we be in demand?
20	Demographic Change and Aging
21	The post-Covid Era: a new era of work?
	Easter Holiday
22	Climate Change and the Future of Labor
23	Project meetings
24	Project meetings
25	UBI, Meaning of Work and Happiness
26	Student presentation
27	Student presentation
28	Wrap-up class

Course Schedule and Reading List

You do not need to purchase any books for this class. All readings have links in this syllabus. Please note that I reserve the right to adjust the course materials as the course progresses. I may tweak readings depending on the pace at which we are making our way through materials or to better align the topics we cover with the interests of the class. I will always give you a notice ahead of any changes.

PART 1. BACKGROUND

Class 1: Course Introduction

Class 2: Declining labor share

- [Understanding the downward trend in labor income shares](). IMF World Economic Outlook, April 2017. Chapter 3.
- Autor et al. (2020). "The Fall of the Labor Share and the Rise of Superstar Firms." *Quarterly Journal of Economics*, May. https://academic.oup.com/qje/article/135/2/645/5721266
- [Trends in Factor Shares: Facts and Implications](). NBER reporter. 2021. https://www.nber.org/reporter/2017number4/trends-factor-shares-facts-and-implications
- [The labor share of income around the world: Evidence from a panel data set](). Geurriero. February 2019. ADBI Working Paper Series.

Supplementary:
- [A new look at the declining labor share of income in the United States.]() McKinsey Global Institute Report. May 2019.

Class 3: Rising inequality

- [World Inequality Report 2022]() and [World Inequality Database]()
- [Trends in income and wealth inequality](). Pew Research Center. January 9, 2020.
- [Rising inequality affecting more than two-thirds of globe](). UN News. January 21, 2020
- Economists Pin More Blame on Tech for Rising Inequality. NY Times. January 11, 2022. https://www.nytimes.com/2022/01/11/technology/income-inequality-technology.html

Class 4: Will new technology erode labor?

- [The Dynamo and the Computer](). Paul David. American Economic Review, 1990.
- [The History of Technological Anxiety and the Future of Economic Growth: Is this Time Different?]() Mokyr et al. Journal of Economic Perspective. 2015.
- [AI and the Future of Labor.]() Yong Suk Lee. Dignity and Development. 2021.

Supplementary
- Gordon, Robert (2016). "The Great Leap Forward from the 1920s to the 1950s: What Set of Miracles Created It?" (Chapter 16) in *The Rise and Fall of American Growth*, Princeton: Princeton University Press, pp. 535-565. https://www-degruyter-com.proxy.library.nd.edu/document/doi/10.1515/9781400888955-019/html

Class 5: Econometrics review

- Whiteboard lecture
- If you feel rusty, review your econometrics notes/textbook or online review notes like this one or this one.

PART 2. ROBOTS AND LABOR

Class 6: The impact of robots on jobs

- Acemoglu, D., & Restrepo, P. 2020. Robots and Jobs: Evidence from US Labor Markets. *Journal of Political Economy*, 128(6): 2188-2244. https://doi.org/10.1086/705716

Class 7: Evolving and varied impact of robots and jobs

- Chung and Lee (2022). "The Evolving Impact of Robots on Jobs" *ILR Review*. https://journals.sagepub.com/doi/abs/10.1177/00197939221137822
- Automation robotics and the factory of the future. McKinsey. September 7, 2017. https://www.mckinsey.com/capabilities/operations/our-insights/automation-robotics-and-the-factory-of-the-future
- Eggleston, Lee, and Iizuka. 2021. Robots and Labor in the Service Sector: Evidence from Nursing Homes. NBER Working Paper 28322. https://www.nber.org/papers/w28322

Supplementary
- Autor, David (2015). "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." *Journal of Economic Perspectives*, 29(3), Summer, pp. 3–30 (https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.29.3.3)

Class 8: Automation, Tasks, and Labor: Theoretical considerations

- Acemoglu, D., & Restrepo, P. 2019. Automation and New Tasks: How Technology Displaces and Reinstates Labor. *Journal of Economic Perspectives*, 33(2): 3-30. https://www.aeaweb.org/articles?id=10.1257/jep.33.2.3

PART 3. AI AND LABOR

Class 9: Machine learning primer. (Virtual Class)

- Machine Learning a Primer by Lizzie Turner (Medium)
  https://medium.com/@lizziedotdev/lets-talk-about-machine-learning-ddca914e9dd1
- Mullainathan, Sendhil, and Jann Spiess. 2017. "Machine Learning: An Applied
  Econometric Approach." *Journal of Economic Perspectives*, 31 (2): 87-106.
  https://www.aeaweb.org/articles?id=10.1257/jep.31.2.87
- Agrawal, Ajay, Gans, Joshua S., and Goldfarb, Avi. 2016. The Simple Economics of
  Machine Intelligence. *Harvard Business Review*.
- Brynjolfsson, Erik and Andrew McAfee (2017). "The Business of Artificial Intelligence:
  What it Can—and Cannot—Do for Your Organization." *Harvard Business Review*, July.
  https://starlab-alliance.com/wp-content/uploads/2017/09/The-Business-of-Artificial-
  Intelligence.pdf

  Supplementary
- Trajtenberg, Manuel (2018). "AI as the Next GPT: A Political Economy Perspective."
  NBER Working Paper 24245, January. https://www.nber.org/papers/w24245.pdf

Class 10: Predicting the impact of AI/ML on jobs

- Carl Benedikt Frey, Michael A. Osborne. 2017. "The future of employment: How
  susceptible are jobs to computerisation?", Technological Forecasting and Social Change,
  114, 254-280
- Brynjolfsson, Erik, Tom Mitchell, and Daniel Rock. 2018. "What Can Machines Learn,
  and What Does It Mean for Occupations and the Economy?" *AEA Papers and Proceedings*
  108: 43-47.
- O*NET Resource Center.
- Georgieff and Hyee. 2021. Artificial Intelligence and Employment: New Cross Country
  Evidence. OECD Report. https://www.oecd-ilibrary.org/docserver/c2c1d276-
  en.pdf?expires=1642437466&id=id&accname=guest&checksum=11BF5D357B7479E22
  2C62005856BC91E

  Supplementary
- Arntz et al. 2016. The Risk of Automation for Jobs in OECD Countries: A Comparative
  Analysis. OECD Report. https://www.oecd-ilibrary.org/social-issues-migration-
  health/the-risk-of-automation-for-jobs-in-oecd-countries_5jlz9h56dvq7-en

Class 11: Predicting the impact of AI/ML on jobs

- Carbonero, Francesco & Davies, Jeremy & Ernst, Ekkehard & Fossen, Frank M. &
  Samaan, Daniel & Sorgner, Alina, 2021. "The Impact of Artificial Intelligence on Labor
  Markets in Developing Countries: A New Method with an Illustration for Lao PDR and

Vietnam," IZA Discussion Papers 14944, Institute of Labor Economics (IZA).
https://docs.iza.org/dp14944.pdf
- Webb, Michael (2020). "The Impact of Artificial Intelligence on the Labor Market."
Stanford University unpublished working paper, January.
(https://www.michaelwebb.co/webb_ai.pdf)
- Acemoglu, Daron, David Autor, Jonathon Hazell, and Pascual Restrepo. 2020. "AI and
Jobs: Evidence from Online Vacancies." *Journal of Labor Econ*

Supplementary
- Acemoglu, Daron and Pascual Restrepo (2019). "The Wrong Kind of AI? Artificial
Intelligence and the Future of Labour Demand." *Cambridge Journal of Regions,
Economy and Society*, November. (https://economics.mit.edu/files/18782)
- Brynjolfsson, Erik, Daniel Rock, and Chad Syverson (2017) "Artificial Intelligence and
the Modern Productivity Paradox: A Clash of Expectations and Statistics",
https://ide.mit.edu/sites/default/files/publications/IDE%20Research%20Brief_v0118.pdf
or for longer version NBER Working Paper 24001. https://www.nber.org/papers/w24001

Class 12: AI and Labor in Health Care
- Goldfarb et al. 2020. Artificial Evidence in Healthcare: Evidence from Online Job
Postings. American Economic Review P&P.
https://www.aeaweb.org/articles?id=10.1257/pandp.20201006
- Artificial Intelligence, the Evolution of the Healthcare Value Chain, and the Future of the
Physician. NBER Working Paper 30607. https://www.nber.org/papers/w30607
- Ziad et al. Dissecting racial bias in an algorithm used to manage the health of populations
https://www.science.org/doi/full/10.1126/science.aax2342

Supplementary
- https://www.brookings.edu/research/why-is-ai-adoption-in-health-care-lagging/
- https://www.healthaffairs.org/doi/10.1377/hlthaff.2018.05424
- https://www.ama-assn.org/about/research/trends-health-care-spending

Class 13: AI and Labor in Finance

- Robert Bartlett & Adair Morse & Richard Stanton & Nancy Wallace, 2021. "Consumer-
lending discrimination in the FinTech Era," Journal of Financial Economics,
https://www.sciencedirect.com/science/article/pii/S0304405X21002403.
- Choi et al. 2022. AI Adoption, Performance, and Jobs: Evidence from Banking. On Canvas.
- The Bank of the Future: The ABCs of Digital Disruption in Finance. Chapter A. Citi GPS.
https://ir.citi.com/CiDxU7p7pAittTmqzfMCS9%2F91IS21vIjJXbn3wjpSEYiTXJ8FvEP
RWx8WmmrKNgBSzDi8E2mGOI%3D

Supplementary

- Grennan, Jill, and Roni Michaely. 2020. "Artificial Intelligence and High-Skilled Work: Evidence from Analysts." *Swiss Finance Institute Research Paper No. 20-84*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681574

Class 14: Algorithms and Human Decision – Criminal Justice
- "Machine Bias" by Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner (ProPublica, 2016)
- Kelinberg, Jon, Himabindu Lakkaraju, Jure Leskovec, Jens Ludwig, and Sendhil Mullainathan. 2018. "Human Decisions and Machine Predictions." Quarterly Journal of Economics 133 (1): 237-293. https://doi.org/10.1093/qje/qjx032

Supplementary

- This is how AI bias really happens and why it's so hard to fix (MIT Technology Review, 2019) https://www.technologyreview.com/2019/02/04/137602/this-is-how-ai-bias-really-happensand-why-its-so-hard-to-fix/
- Lee, Nicol Turner, Paul Resnick, and Genie Barton (2019). "Algorithmic Bias Detection and Mitigation." Brookings Institution, October 30. (https://www.brookings.edu/research/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/)

Class 15: Roundtable discussion

- Roundtable discussion on research proposal

MIDTERM BREAK

PART 4. MANAGEMENT, ENTREPRENEURSHIP, WORK AND SKILLS

Class 16: Management and Algorithms
- Nick Bloom and John Van Reenen. 2018. Measuring and Explaining Management Practices Across Firms and Countries. Quarterly Journal of Economics. https://drive.google.com/file/d/1m0o_7PZU9t3lEFcu7D3t3bylp7TymDmJ/view
- Bloom et al. Do Management Interventions Last? 2020. Evidence from India. American Economic Journal: Applied Economics. https://drive.google.com/file/d/1zZVMYPXUulqIPAaCWPTEoCY7zoYj7Nhp/view
- Mike Walsh. 2019. "When Algorithms Make Managers Worse". Harvard Business Review. https://hbr.org/2019/05/when-algorithms-make-managers-worse

- Spencer Soper. 2021. "Fired by Bot at Amazon: It's You Against the Machine." Bloomberg. https://www.bloomberg.com/news/features/2021-06-28/fired-by-bot-amazon-turns-to-machine-managers-and-workers-are-losing-out

Supplementary
- NPR. Amazon warehouse workers in Alabama vote for second time in union effort. https://www.npr.org/2022/02/04/1077089349/amazon-union-vote-alabama
- Min Kyung Lee. 2018. Understanding perception of algorithmic decisions: Fairness, trust, and emotion in response to algorithmic management. Big Data & Society. https://journals.sagepub.com/doi/full/10.1177/2053951718756684

Class 17: Entrepreneurship and Innovation

- 2021 AI Index Report. Stanford University. Ch 3. The Economy. https://aiindex.stanford.edu/wp-content/uploads/2021/03/2021-AI-Index-Report-_Chapter-3.pdf
- Lerner, Josh, and Ramana Nanda. 2020. "Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn." *Journal of Economic Perspectives*, 34 (3): 237-61. https://www.aeaweb.org/articles?id=10.1257/jep.34.3.237
- Azoulay, Pierre, Benjamin F. Jones, J. Daniel Kim, and Javier Miranda. 2022. "Immigration and Entrepreneurship in the United States." *American Economic Review: Insights*, 4 (1): 71-88. https://www.aeaweb.org/articles?id=10.1257/aeri.20200588
- Eesley, Charles, and Yong Suk Lee. 2020. Do University Entrepreneurship Programs Promote Entrepreneurship? *Strategic Management Journal.* https://onlinelibrary.wiley.com/doi/full/10.1002/smj.3246

Supplementary
- Lee. 2018. Entrepreneurship and Economic Growth in Cities. Journal of Economic Geography
- The Top AI Companies to Watch in 2021. Forbes. https://www.forbes.com/sites/alanohnsman/2021/04/26/ai-50-americas-most-promising-artificial-intelligence-companies/?sh=7a7c02fe77cf
- What's the best startup/VC database? https://medium.com/@andreretterath/what-s-the-best-startup-vc-database-8237fc189830
- Retterath, Andre and Braun, Reiner, Benchmarking Venture Capital Databases (September 17, 2020). Available at http://dx.doi.org/10.2139/ssrn.3706108

Class 18: New work
- Angrist et al. 2021. New Frontiers: The Origins and Content of New Work, 1940–2018. NBER Working Paper 30389. https://www.nber.org/papers/w30389
- Jeff Lin. Technological Adaptation, Cities, and New Work. *Review of Economics and Statistics.* 2011. https://doi.org/10.1162/REST_a_00079
- Ajay Agrawal, Joshua Gans, and Avi Goldfarb (2019). "Artificial Intelligence: The Ambiguous Labor Market Impact of Automating Prediction." *Journal of Economic Perspectives*. https://pubs.aeaweb.org/doi/pdf/10.1257/jep.33.2.31

Class 19: Future skills: Which skills will be in demand?
- Heckman James J., Kautz Tim, "Hard Evidence on Soft Skills," *Labour Economics*, 19 (2012), 451–464
- Deming, David J. 2017. "The Growing Importance of Social Skills in the Labor Market." *Quarterly Journal of Economics* 132: 1593-1640. https://academic.oup.com/qje/article/132/4/1593/3861633

Supplementary
- Deming, David and Kadeem Noray. "Earnings Dynamics, Changing Job Skills, and STEM Careers." *Quarterly Journal of Economics*, 135(4): 1965-2005.
- Heckman James J., Kautz Tim, "Hard Evidence on Soft Skills," *Labour Economics*, 19 (2012), 451–464
- Deming, David and Lisa Kahn "Skill Requirements across Firms and Labor Markets: Evidence from Job Postings for Professionals." *Journal of Labor Economics*, 36.S1: S337-S369.
- https://www.nytimes.com/2019/09/20/business/liberal-arts-stem-salaries.html
- https://www.nytimes.com/2015/10/18/upshot/how-the-modern-workplace-has-become-more-like-preschool.html

PART 5. MACRO-LEVEL CHANGES AND THE FUTURE OF LABOR

Class 20: Demographic Change and Aging
- Acemoglu and Restrepo. 2017. "Secular Stagnation? The Effect of Aging on Economic Growth in the Age of Automation" American Economic Review P&P. https://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.p20171101
- Hal Varian. 2020. Automation versus Procreation. VoxEU Column. https://cepr.org/voxeu/columns/automation-versus-procreation-aka-bots-versus-tots
- https://www.eastwestcenter.org/publications/low-fertility-in-japan—no-end-in-sight
- Eggleston, Lee, and Iizuka. 2021. Robots and Labor in the Service Sector: Evidence from Nursing Homes. NBER Working Paper 28322. https://www.nber.org/papers/w28322

Supplementary
- Aging Japan Wants Automation, Not Immigration. Bloomberg, Aug. 22, 2017. https://www.bloombergquint.com/opinion/aging-japan-wants-automation-not-immigration
- Why China's Shrinking Population is a Cause for Alarm. https://www.nytimes.com/2023/01/18/world/asia/china-population-shrinking.html

Class 21: The Post-Covid Era: Has the willingness to work changed?

- Where Are the Workers? From Great Resignation to Quiet Quitting, with D. Lee and J. Park, January 2023. NBER Working Paper No. 30833. https://bpb-usw2.wpmucdn.com/sites.wustl.edu/dist/1/2138/files/2023/01/where-are-workers.pdf

- Barrero et al. 2021. [Why Working from Home Will Stick](https://www.nber.org/papers/w28731). NBER Working Paper 28731. https://www.nber.org/papers/w28731
- [Easterlin et al. 2010. The Happiness-Income Paradox. Proceedings of the National Academy of Sciences. https://www.pnas.org/doi/abs/10.1073/pnas.1015962107](https://www.pnas.org/doi/abs/10.1073/pnas.1015962107)
- Giurge et al. 2020. Why time poverty matters for individuals, organizations and nations. Nature Human Behavior. https://www.nature.com/articles/s41562-020-0920-z

Supplementary
- Bloom et al. 2014. [Does Working from Home Work?](https://nbloom.people.stanford.edu/sites/g/files/sbiybj4746/f/wfh.pdf) Quarterly Journal of Economics. https://nbloom.people.stanford.edu/sites/g/files/sbiybj4746/f/wfh.pdf
- "The Big Quit". https://hub.jhu.edu/2021/12/17/christina-depasquale-great-resignation/
- Robert Gordon. 2012. Is US Economic Growth Over? NBER Working Paper. https://www.nber.org/system/files/working_papers/w18315/w18315.pdf
- "The Great Resignation: Why Americans are quitting their jobs more than ever before". CBS News. https://www.cbsnews.com/news/great-resignation-60-minutes-2022-01-10/
- "*America's Best Days May Be Behind It" NYTimes.* https://www.nytimes.com/2016/01/20/business/economy/a-somber-view-of-americas-pace-of-progress.html?_r=0
- Domas and Summers. 2022. [How Tight Are US Labor Markets?](https://www.nber.org/papers/w29739) NBER Working Paper 29739. https://www.nber.org/papers/w29739

Class 22: Climate Change and the Future of Labor

- Montt et al. 2018. The future of work in a changing natural environment: Climate change, degradation and sustainability. ILO Future of Work Research Paper Series. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_644145.pdf
- Colmer, Jonathan. 2021. "Temperature, Labor Reallocation, and Industrial Production: Evidence from India." *American Economic Journal: Applied Economics*, 13 (4): 101-24. https://www.aeaweb.org/articles?id=10.1257/app.20190249
- Henderson, J. V., A. Storeygard, and U. Deichmann (2017). Has climate change driven urbanization in Africa? Journal of development economics 124, 60–82. https://www.sciencedirect.com/science/article/pii/S0304387816300670
- Leah Platt Boustan & Matthew E. Kahn & Paul W. Rhode & Maria Lucia Yanguas, 2020. "**[The Effect of Natural Disasters on Economic Activity in US Counties: A Century of Data,](#)**" Journal of Urban Economics,

Class 23: Project meetings to discuss research paper and presentations

Class 24: Project meetings to discuss research paper and presentations

Class 25: Universal Basic Income, Meaning of Work and Happiness
- Hilary Hoynes and Jesse Rothstein. 2019. Universal Basic Income in the US and Advanced Countries. NBER Working Paper 25538. https://www.nber.org/papers/w25538

- Heller, Nathan (2018). "Who Really Stands to Win from Universal Basic Income?" *The New Yorker*, July 9 & 16 Issue. (https://www.newyorker.com/magazine/2018/07/09/who-really-stands-to-win-from-universal-basic-income)
- Freeman RB. "Why Do We Work More than Keynes Expected?". In: Revisiting Keynes: Economic Possibilities for Our Grandchildren. Cambridge MA : MIT Press ; 2008. pp. 135-42. https://scholar.harvard.edu/files/freeman/files/why-do-we-work-more-keynes-expected_ms-for-pecchi-piga-vol-4-07.pdf
- Easterlin. 2003. Explaining happiness. Proceedings of the National Academy of Sciences. https://www.pnas.org/doi/epdf/10.1073/pnas.1633144100
- Cassar, Lea, and Stephan Meier. 2018. "Nonmonetary Incentives and the Implications of Work as a Source of Meaning." *Journal of Economic Perspectives*, 32 (3): 215-38. https://www.aeaweb.org/articles?id=10.1257/jep.32.3.215

Supplementary
- Killingsworth. 2021. Experienced well-being rises with income, even above $75,000 per year. Proceedings of the National Academy of Sciences. https://www.pnas.org/doi/10.1073/pnas.2016976118#sec-1
- This is our chance to completely redefine the meaning of work. World Economic Forum. https://www.weforum.org/agenda/2019/01/this-is-our-chance-to-redefine-the-meaning-of-work/
- Peter Kuhn & Fernando Lozano, 2008. "The Expanding Workweek? Understanding Trends in Long Work Hours among U.S. Men, 1979-2006," Journal of Labor Economics, University of Chicago Press, vol. 26(2), pages 311-343, April.

Class 26: Student Presentations

Class 27: Student Presentations

Class 28: Wrap-up – Reflection and Perspectives

- The Work of the Future: Building Better Jobs in an Age of Intelligent Machines. MIT Work of the Future Final Report. 2020. https://workofthefuture.mit.edu/wp-content/uploads/2021/01/2020-Final-Report4.pdf
- Forum: AI's Future Doesn't Have to Be Dystopian and Response articles https://www.bostonreview.net/forum/ais-future-doesnt-have-to-be-dystopian/
- "The American Corporation is in Crisis—Let's Rethink It" by Lenore Palladino (Boston Review, 2019) and response.
- https://bostonreview.net/forum_response/isabelle-ferreras-shareholders-versus-stakeholders/