Application to the NBER Digital Economics and AI Tutorial

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Course of study

I am a fifth year economics PhD student from Sweden, based at Örebro University and the Ratio Institute. I am part of AI-Econ Lab, a research group dedicated to studying the economic impact of AI, primarily from a labor market perspective. I will be spending the spring term of 2025 as a visiting PhD student at the MIT Department of Economics. My host at MIT is professor David Autor. I expect to complete my PhD in late 2025.

Research interests

Throughout my PhD studies, the impact of AI on the labor market has been the focus of my research. I am a coauthor of several ongoing papers related to this topic. Given my research interests, I would be thrilled to have the opportunity to participate at the NBER Digital Economics and AI Tutorial at Stanford University.

I am driven by a belief that the progress that is happening in AI technology has the potential to have a significant impact on society. By contributing with high quality research, we economists can help society to make sense of the potentially rapid changes that are occurring. When the discussion can be based on solid theoretical frameworks and empirical evidence, it will make it easier for society to respond in the best way possible, taking advantage of the opportunities, while mitigating the risks.

I am broadly interested in the many ways that AI may impact our society, including areas such as living standards, regulation, mental health, and political economy. My PhD research has primarily taken a labor market perspective. Some key questions in this field includes which jobs will be affected most by AI; how the demand for human labor may be impacted in different parts of the labor market, with implications for inequality, wages and employment; and how the work force can be equipped to thrive on tomorrow's labor market. It is both fascinating and challenging to study a phenomenon that is evolving so fast.

In my research, I have used several methodologies and data sources to shed light on the impact of AI on the labor market. This includes full-population administrative data on firms and individuals, including information on individuals' abilities from military conscription tests. I combine these data, e.g., with data on job ads, occupations, and AI progress. This rich pool of data allows me to study the evolution of the labor market and the impact of AI in granular detail, including heterogeneous effects. Below I describe several of my ongoing projects in more detail.

In one of our papers, we build on the work of Felten et al. (2018) and Felten et al. (2021) to develop a model of how progress in AI impacts occupations. Our contributions include gathering data on AI performance benchmarks to observe the timing of breakthroughs in different areas of AI, and incorporating a more nuanced model of occupational work content. When then relate the AI exposure index to micro data on individuals and firms from Sweden, Denmark, and Portugal. This allows us to study the relationship between AI exposure and labor markets across several dimensions, including time, type of occupation, country, and type of AI. This project has been published as a working paper (Engberg et al., 2024).

In a second study that has also been published as a working paper (Engberg et al., 2023), we use German micro-data to examine the relationship between AI, tasks and skills on the worker level. We find that AI-exposed and robotics-exposed jobs differ markedly regarding their task and skill content. Both types of work have seen substantial changes in their task and skill contents in recent decades, and we identify both commonalities and differences in those changes.

A third paper is in a similar vein as Autor et al. (2024) and Lin (2011), where we study the emergence and exiting of job titles on the Swedish labor markets in recent years. While the time interval is shorter compared to previous studies, we are able to delve into detail, using job ads and registry data, to shed light on recent developments on the labor market. We characterize the new and disappearing jobs and analyze the relationship between these labor market dynamics and AI.

Participating at the workshop would be a valuable opportunity for me to meet and learn from leading researchers in the field of AI, digitization and economics, and to network with other PhD students with similar interests to mine. Thank you for considering my application.

References

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