

# Behind the Markets: AI and the Future of Work Conference at Wharton

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## Key Takeaways

- We discuss the classic ‘will AI replace jobs?’ question. So far, the research cited here says ‘no’ – it will accelerate certain tasks within certain jobs and change our thinking about human capital.
- Ethan Mollick delivered the keynote presentation, where he hit on four big changes that he expects to happen within academic research and publication due to AI.
- People would do well to remember the paradigm that happened with bank tellers – we thought ATMs would replace them, but the reality was that more needed to be hired to do the value-added tasks for more customers, so they were busier after the ATM was introduced.
- The call centre is very tangible—initial research indicates that AI can help bottom performers or new employees get closer, faster, to the level of top performers. It is harder to see whether these systems raise the capabilities of the top performers.
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This week, we were fortunate to have Daniel Rock, Assistant Professor of Operations, Information and Decisions at Wharton, back on the Behind the Markets podcast. Jeremy and Daniel were able to discuss the “AI and the Future of Work” conference that had just occurred at Wharton on 22 and 23 May 2024.

In many of our discussions with investors, there is a recognition that AI is exciting and that many of the world’s largest companies are making massive investments in Nvidia’s chips to expand their computing infrastructure. Still, it becomes harder to think about how AI will impact different industries or even people as they do their jobs.

This conference aimed to help answer some of those questions, at least to the extent possible in the first half of 2024.

**It’s possible that AI can add 1.5% to total factor productivity**

Daniel spoke to Professor Siegel early in the conversation about AI's high-level impact on productivity. Many developed countries face ageing populations and excessive debt burdens, so technology could be an important force in catalysing enough growth to help deal with these issues. An extra 1.5% in total factor productivity would be powerful, especially if it were sustained over a period of time.

## Task acceleration, not job replacement

When the Automated Teller Machine (ATM) was introduced at banks, was the role of the bank teller replaced or expanded as a result? While it was initially assumed that bank tellers would disappear, banks ultimately needed to hire more of them because they could provide different, value-added services. It is a good paradigm to consider when thinking about AI's impact on jobs. Daniel and some colleagues have analysed an array of 900 occupations, mapping 20,000 tasks within those occupations and seeking to understand where large language models could help in accelerating some of these tasks.

The bottom line is that their work so far does not indicate widespread cases of people being completely replaced by AI. On the other hand, the work does indicate that different types of human capital will likely be repriced, similar to how the job of the bank teller needed to change once the world became used to ATMs.

A more current example that was discussed at the conference was helpful in conceptualising the impact of AI over the short term in a call centre. The biggest impact was helping the lowest-performing or newest workers increase their skills to be closer to the top-performing employees. It's possible that there has not been enough time or that it is harder to measure if the systems are dramatically impacting the skills of employees who are already top performers.

## Ethan Mollick's keynote about four singularities for research

Ethan Mollick, the Ralph J. Roberts distinguished faculty scholar and Associate Professor of Management at Wharton, delivered the keynote at the conference.

He discussed four narrow 'singularities' for research, which he defined as a future point in human affairs where AI has so altered the field or industry that we cannot fully imagine what the world on the other side looks like. The four singularities that he discussed were<sup>1</sup>:

1) **How we write and publish:** If AI can help with writing, it could allow scientists to focus on their actual research areas. The process of publication could speed up.

2) **How we research:** While large language models are not perfect and can be prone to hallucination, they can also do things that would be time-consuming for humans. Mollick gave Gemini Pro the 20 papers and books he had published before 2022. It was able to extract direct quotes and find overarching themes, only with minor errors – a task that would have taken hours.

3) **What our research means:** Sometimes, it can be difficult to take the content of a fairly technical, specific paper and show the application to the broader world or a wider audience outside of the direct field of study. AI might be able to bridge this gap and show a wider audience the importance of more academic research.

4) **What we research:** One of the most interesting conundrums is how large language models are, seemingly, so good at simulating human thought without necessarily being able to think. We need to continue increasing our understanding of how these systems work.

Anyone looking to advance their understanding of AI and its impact would do well to follow Ethan Mollick's work. He is a prolific publisher on many freely available forums.

Many papers were cited during this discussion between Jeremy and Daniel, so if you are interested in academic works seeking to analyse the impact of AI, you may get some ideas for further reading from this discussion, available [here](#).

1 Source: Mollick, Ethan. "Four Singularities for Research." One Useful Thing Substack. May 26, 2024.

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