The AI Awakening:  
Implications for the Economy and Society  
Econ 295/CS323  |  Spring 2023  
Subject to Change: Check back frequently

Instructor: Erik Brynjolfsson  
Co-instructors: Sebastian Thrun and James Manyika  
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Course Manager: Susan Young  
Administrative Assistant: Megan Deason (mdeason@stanford.edu)

Class Meeting Time: Tuesdays from 4:30-5:50pm, April 4 - June 6  
Location: Gates Building, Room B03 (note new room)

Optional Unsupervised Learning Sessions: Four selected Thursdays from 4:30-5:30pm at Gates B03 (April 6, April 20, and the last two sessions TBC)  
Instructor Office Hours: Monday 11:00am-12:00noon at Gates 136  
TA Office Hours: Tuesday 1:00-2:00pm at Gates 138  
Canvas: https://canvas.stanford.edu/courses/174140

INTRODUCTION

Our economic institutions, organizations, and skills have not kept up with rapid advances in AI. In this growing gap lie many of society's greatest challenges and opportunities.

This course will explore how the advances in AI can and will transform our economy and society in the coming years. Each week, we will learn from frontier researchers and industry leaders in technology and economics, read the relevant research, and discuss the implications.

CLASS ORGANIZATION

Requirements

1. Class attendance at 10 sessions, including nine regular 80-minute meetings plus one four-hour session (4:30-8:30pm on June 6) for final project presentations.
2. Weekly readings: Typically 2-3 required readings and 3-5 optional readings
3. Six (of eight) one-page memos due by 5pm the Sunday before class via Canvas
   a. Each week, several of the memo writers will be asked to discuss their memos in class and some may be invited to join a private dinner with that week’s guest speaker.
4. One final team project (see guidelines)
   a. Team formation by 5pm on Friday, April 21. Teams of up to four people should be diverse on multiple dimensions, with no more than two students from the same program.
   b. Progress update on final team project; due by 5pm on Friday, May 12
   c. Team presentation with Q&A in class on June 6
   d. 5-page proposal for transformative AI venture (for profit or nonprofit) or policy proposal; due by 5pm on June 9 (details to come)
### Grading
- 24% six (of eight) one-page memos or assignments
- 10% mid-quarter progress update on final team project
- 15% final presentation content and delivery
- 25% final project document
- 26% contribution to class discussions

### SCHEDULE

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Guests (subject to change)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>April 4</td>
<td>4:30-5:50pm</td>
<td>Introduction: The AI Awakening</td>
<td>Erik Brynjolfsson</td>
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<td>Sebastian Thrun</td>
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<td>Jack Clark</td>
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<td>2</td>
<td>April 11</td>
<td>4:30-5:50pm</td>
<td>Large language models</td>
<td>Mira Murati</td>
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<td>3</td>
<td>April 18</td>
<td>4:30-5:50pm</td>
<td>Technical progress in AI</td>
<td>Jeff Dean</td>
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<td>4</td>
<td>April 25</td>
<td>4:30-5:50pm</td>
<td>Opportunities and Risks of AI</td>
<td>Eric Schmidt</td>
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<td>5</td>
<td>May 2</td>
<td>4:30-5:50pm</td>
<td>Human + machine</td>
<td>Alexandr Wang</td>
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<td>6</td>
<td>May 9</td>
<td>4:30-5:50pm</td>
<td>Business Implications of AI</td>
<td>Bindu Reddy</td>
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<td>7</td>
<td>May 16</td>
<td>4:30-5:50pm</td>
<td>Work and employment</td>
<td>Laura Tyson</td>
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<td>8</td>
<td>May 23</td>
<td>4:30-5:50pm</td>
<td>A World without Work</td>
<td>Mustafa Suleyman</td>
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<td>9</td>
<td>May 30</td>
<td>4:30-5:50pm</td>
<td>AI, Geopolitics and Democracy</td>
<td>Condoleezza Rice</td>
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<td>10</td>
<td>June 6</td>
<td>4:30-8pm</td>
<td>Final projects presentations</td>
<td>Roy Bahat</td>
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<td>Songyee Yoon</td>
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<td>Panos Madamopoulos-Moraris</td>
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READINGS

See Daedalus special issue on AI and Society (Volume 151 Issue 2) for many of the readings

April 4: Intro and overview; Progress in AI

Main readings:

2. Clark, Jack. Import AI 321: Open source GPT-3; giving away democracy to AGI companies: GPT-4 is a political artifact. March 21, 2023

Optional readings:


April 11: Large language models/Generative models

Main readings:

Optional readings:


April 18: Technical progress in AI

Main reading:


Optional readings:

7. OpenAI. "GPT-4 Technical Report". March 2023
April 25: Opportunities and Risks of AI

Main reading:

2. Henry Kissinger, Eric Schmidt and Daniel Huttenlocher *ChatGPT Heralds an Intellectual Revolution* WSJ. Feb 24, 2023

Optional readings:


May 2: Human + Machine; Reinforcement Learning from Human Feedback (RLHF)

Main reading:


Optional readings:


May 9: Business Implications of AI

Main reading:


Optional readings:

4. Knight, Will, “ChatGPT’s most charming trick is also its biggest flaw” Wired, December 7, 2022

May 16: Work and employment

Main readings:


Optional readings:


May 23: A World without Work

Main reading:

1. Mustafa Suleyman. “Four Features of the Coming Wave”. Chapter 7 of The Coming Wave. Please note: This document is confidential and must not be shared.
2. Altman, Sam. “Moore’s law for everything”

Optional readings:


May 30: AI, Geopolitics and Democracy

Main reading:


Optional readings: