Artificial Intelligence and the Future of Work
Anton Korinek (FOB 163, KorinekA@darden.virginia.edu)
Early week, 10 – 11:25am
Classroom 180

Course Description:

Advances in artificial intelligence have proceeded rapidly in recent years and have reached an inflection point that will have profound implications for the future of work and the future of humanity.

How does rapid progress in artificial intelligence and automation affect businesses, employment, our economy and, most importantly, you? And what can you personally do to remain competitive in a labor market in which an increasing number of jobs is displaced by artificial intelligence?

In the first part of this course (sessions 1 – 7), we analyze the short-, medium- and long-run implications of continued progress in AI for labor markets and the economy. Rather than covering specific technical details, it will provide you with a broad framework for how to think about AI and its impact on the economy, how to acquire skills that will likely remain relevant over the coming decades, and how to professionally benefit from the rise of AI.

The second part of the course (sessions 8 – 14) goes into depth on a few selected areas that I anticipate to be of growing importance in the age of AI, starting with questions of ethics in AI applications, cybersecurity, AI failure modes and the AI control problem, as well as the impact of AI on financial markets.

Objectives:

At the conclusion of this course, you will be able to:

- evaluate how different skills, jobs and sectors of the economy will be affected by AI
- devise a plan for how to effectively manage your career in the age of AI
- identify opportunities to professionally benefit from the rise of AI
- integrate the various utopian and dystopian claims about the future effects of AI

Course Materials:

The course materials will be distributed via CANVAS and as course packs.

Office Hours:

Tue after class and by appointment

Note: since my main appointment is on main grounds, I spend only limited time on Darden grounds

Course Requirements and Grade:

1/3 Course preparation and participation
1/3 Sectoral Impact Study OR Pitch of an AI startup to VCs
1/3 Final exam

No opportunities for extra credit.
Course Participation:

The course will require a significant time investment on your part - I expect you to spend on average two hours per class meeting on preparing our readings and the assigned questions. Therefore a significant part of your grade will reflect your contribution to the classroom discussions, including your response to potential cold calls.

Regular attendance is mandatory to obtain a full participation grade. If you are unable to make it to a class for one of the reasons allowed by university policy, please send me an email explaining your absence so that no points will be dropped. Exceptions to this policy (e.g. for interviews) require prior approval by email.

The course has a no-cell phones, no-tablets, and no-laptops policy during class time. [Research has shown that this makes for a far better learning experience.]

In return, I commit to teaching the best I can and invest a lot of time into developing thoughtful course materials, preparing and leading interesting discussions, and producing deep insights. I commit to supporting your learning goals and assisting you in mastering the material. Finally, I commit to doing my best to make our insights relevant and prepare you for the AI-powered future that lies ahead of us.

Group Presentation: Sectoral Impact Study OR Pitching an AI Startup to VCs:

An important part of the course is a group project and presentation. You have a choice between two options:

1) Conduct an impact study of how AI will affect a specific sector of the economy

2) Pitch an AI startup idea to venture capitalists

No matter which of the two you choose, the core objective is for you to think about the opportunities and disruptions created by AI in a sector of the economy that is of interest to you.

The following timeline and deadlines are intended to guide you through the process:

**Evaluation criteria for group presentation (equally weighted at 25%):**

<table>
<thead>
<tr>
<th>for sectoral impact study:</th>
<th>for AI startup pitch:</th>
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<tbody>
<tr>
<td>Depth</td>
<td>Originality</td>
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<td>Practical Usefulness</td>
<td>Feasibility &amp; Financial Promise</td>
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<td>Professionalism and Timeliness of Materials &amp; Presentation</td>
<td>Quality of Slides</td>
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*Note: all group members will receive the same grade for this part of the course*

Final Exam:

The final exam will test you on the basic concepts that we cover throughout the quarter. If you have regularly prepared for class and participated in the classroom discussion, it will not be very burdensome to be on top of the material.
## Course Outline:

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Topic</th>
<th>Materials Due</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan 21</td>
<td>Introduction &amp; A Cold Wake-Up Call</td>
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<td>2</td>
<td>Jan 22</td>
<td>The State of Artificial Intelligence</td>
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<td>3</td>
<td>Jan 27</td>
<td>What is Intelligence?</td>
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<td>4</td>
<td>Jan 28</td>
<td>The History and Future of Work</td>
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<td>5</td>
<td>Feb 3</td>
<td>Automation and Unemployment</td>
<td>teams; prez topic</td>
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<td>6</td>
<td>Feb 4</td>
<td>Digitization and Superstars</td>
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<td>7</td>
<td>Feb 10</td>
<td>Preparing for the Non-Existent Future of Work?</td>
<td>sources &amp; outline</td>
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<td>8</td>
<td>Feb 11</td>
<td>Ethics of AI: Trolley Cases and AVs (guest speaker: J.Basl)</td>
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<tr>
<td>9</td>
<td>Feb 17</td>
<td>Cybersecurity</td>
<td>full draft of slides</td>
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<td>10</td>
<td>Feb 18</td>
<td>AI Failure Modes and the AI Control Problem</td>
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<td>11</td>
<td>Feb 24</td>
<td>Group Presentation</td>
<td>deliver presentation</td>
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<td>12</td>
<td>Feb 25</td>
<td>AI in Financial Markets (guest speaker: John Chamberlin)</td>
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<td>13</td>
<td>Mar 2</td>
<td>Group Presentation</td>
<td>deliver presentation</td>
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<td>14</td>
<td>Mar 3</td>
<td>Shaping the Future &amp; Conclusions</td>
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Timeline for Group Presentations:

**Team formation & choice of topic:**
- now until Feb 3rd: form teams of 4 - 5 students
- Jan 28th: receive in-class instructions on presentations
- Jan 28th: optional: office hour meetings to discuss topics
- **Feb 3rd**: due date for team designations and choice of topic

**List of source materials for presentation & outline:**
- Feb 7th: optional: office hour meetings to discuss one-page summary
- **Feb 10th**: due date for outline & sources
  sign up for an office hour meeting slot for Feb 17th/18th

**Full draft slides of impact study or pitch deck:**
- **Feb 17th**: due date for draft
- Feb 17th/18th: mandatory: office hour meetings to discuss draft slides

**Presentations to a jury of VCs:**
- Feb 24th & Mar 2nd: presentations jointly by all team members
- presentations should be about 10 - 12 min per team of 5
- prepare about 8 - 10 slides per team of 5