

Artificial Intelligence and the Future of Work

2018/19 Q3

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Early week, 10 – 11:25am

Classroom 290

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- and medium-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 its impact on financial markets, questions of cybersecurity and the global race for AI supremacy. We will also discuss the long-run implications of artificial intelligence rivaling human intelligence.

Objectives:

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

- integrate the various utopian and dystopian claims about AI into a coherent perspective
- 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

Course Materials:

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

Office Hours:

Mon 3:15 – 4:15pm and by appointment

Note: since my main appointment is on main grounds, I can 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:

Team formation & choice of topic:

- Jan 22nd – Jan 25th: form teams of 4 - 5 students
- Jan 23rd: receive in-class instructions for presentations
- Jan 25th: *optional*: office hour meetings to discuss topic
- **Jan 28th: due date** for team designations and choice of topic

One-page summary: list outline of presentation source materials

- Feb 1st: *optional*: office hour meetings to discuss one-page summary
- **Feb 4th: due date** for one-page summary
sign up for an office hour meeting slot for Feb 8th

Full draft slides of impact study or pitch deck:

- Feb 8th: *mandatory*: office hour meetings to discuss draft
- **Feb 11th: due date** for draft
- Feb 15th: *optional*: office hour meetings to discuss draft

Presentations to a jury of VCs:

- Feb 18th & 19th: presentations jointly by all team members
- presentations should be at most 15 min per team of 5
- prepare about 10 slides per team of 5

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

<i>for sectoral impact study:</i>	<i>for AI startup pitch:</i>
Depth	Originality
Practical Usefulness	Feasibility & Financial Promise
Professionalism and Timeliness of Materials & Presentation	
Quality of Slides	

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:

	#	Date	Topic	Materials Due
Intelli- gence	1	Jan 14	Introduction & A Cold Wake-Up Call	
	2	Jan 15	What is Intelligence?	
	3	Jan 22	The State of AI (guest speaker: Michael Albert)	
Economics	4	Jan 23	The History and Future of Work	
	5	Jan 28	Automation and Unemployment	teams; topic
	6	Jan 29	Jobs for the Future	
	7	Feb 4	Digitization and Superstars	one-page summary
Specific Applications	8	Feb 5	AI in Financial Markets (guest speaker: John Chamberlin)	
	9	Feb 11	Cybersecurity (guest speaker: Dave Evans)	full draft of slides
	10	Feb 12	Cyberattack	
	11	Feb 18	Group Presentation	deliver presentation
	12	Feb 19	Group Presentation	deliver presentation
	13	Feb 25	The Global Race for AI Supremacy	
	14	Feb 26	Shaping the Future & Conclusions	