EASTON TECHNOLOGY MANAGEMENT CENTER

UCLA ANDERSON SCHOOL OF MANAGEMENT

MGMT 180-X

Business Applications of Artificial Intelligence and Machine Learning

Class Time: Tuesday and Thursday, 9:00 a.m. - 12:00 p.m.
Course Instructor: Ariel Jalali
Phone: 310-779-6460
Email: ariel@sensay.it

COURSE CATALOG DESCRIPTION:

This course provides a practical foundation in artificial intelligence and machine learning technology through the lens of industry examples. The main objective of the course is to educate and inspire the creation of the next generation of awesome products and business models that leverage AI/ML for the betterment of humanity.

The course uses subject matter experts in the various application fields to bring real life business applications into the classroom for discussion and healthy debate. There is a lot of confusion and misunderstanding of AI in the news media and general population around what AI can and cannot do and what the business opportunities and societal impacts of AI will or will not be. The course aims to arm the students with enough technological and business facts by examining current projects and trends and helping them connect the data points towards how AI might develop in the future impacting the trajectory of their careers and lives. While technical topics will be covered in the course, it will be completely accessible to students of all levels of technical background, including non-technical.

COURSE OBJECTIVES:

- To gain an understanding of all the facets of Artificial Intelligence (AI) technology
- To gain an understanding of the business applications of AI today
- To gain an understanding of the business applications of AI in the future
- To gain an understanding of the ethical and societal impact of AI
- To gain an understanding of ways in which your career and skills may relate to AI
REQUIRED READINGS:

Optional Course Text(s):

The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World
Pedro Domingos
352 pages
Publisher: Basic Books; 1 edition (September 22, 2015)
ISBN-10: 0465065708

Superintelligence: Paths, Dangers, Strategies
Nick Bostrom
390 pages
Publisher: Oxford University Press; Reprint edition (May 1, 2016)
ISBN-10: 0198739834

Homo Deus: A Brief History of Tomorrow
Yuval Noah Harari
Hardcover: 464 pages
ISBN-10: 0062464310

Our Final Invention: Artificial Intelligence and the End of the Human Era
James Barrat
336 pages
Publisher: St. Martin’s Griffin; Reprint edition (February 17, 2015)
ISBN-10: 1250058783

Deep Learning (Adaptive Computation and Machine Learning series)
Ian Goodfellow
800 pages
Publisher: The MIT Press (November 18, 2016)
ISBN-10: 0262035618

Course Material:

Handouts: To be assigned during class

Presentations: To be assigned during class

Final Project:

The students will demonstrate their work in front of the class as part of the final submission of their final project. The final project format will be a slide presentation of that either creates or improves upon a
company, product, career or organization based on one or more of the key topics in the course. Please ensure that you cite all sources in your final project.

Grading:
Class Participation 25%
Test/Quiz/Assignments 25%
Project: 50%
Total: 100%

The Grading Scale
A : 900 - 1000
B : 800 - 899
C : 700 - 799
D : 600 - 699
F : 599 and below

Course Outline:

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<th>Week</th>
<th>Subject</th>
<th>Assignment</th>
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<tr>
<td>Week 1</td>
<td><strong>Overview and Definitions</strong></td>
<td>Assignment 1</td>
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<td><strong>TUE</strong> AI - What it is today, what it is not</td>
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<td>AI - What it can be in the future</td>
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<td><strong>THU</strong> Business landscape for AI commercialization (VC perspective)</td>
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<td>(Guest Lecturers: John Mannes, Shabi Rizvi - tentative)</td>
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<td>Week 2</td>
<td><strong>Technology Overview (How it works)</strong></td>
<td>Assignment 2</td>
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<td><strong>TUE</strong> NLP and chatbots</td>
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<td>(Guest Lecturer: Amir Shevat)</td>
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<td></td>
<td><strong>THU</strong> Machine Learning and Neural Networks</td>
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<td>(Guest Lecturer: Siraj Raval - tentative)</td>
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<td>Week 3</td>
<td><strong>Sensory Awareness</strong></td>
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<td><strong>TUE</strong> Voice and speech</td>
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<td>Computer Vision</td>
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<td>(Guest Lecturer: Drew Shepard or Microsoft TBD)</td>
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| Week 4 | **Week 4 - Automation**  
TUE  
Robotics  
Automation and Jobs  
  AI plus jobs  
  AI minus jobs  
(Guest Lecturer: Rob May - tentative) | Assignment 4 |
| --- | --- | --- |
| Week 5 | **Week 5 - What does AI mean for humanity?**  
TUE  
Ethics, privacy and responsible AI  
(Guest Lecturer: Dr. Julie Albright)  
THU  
What the future holds for humans and AI?  
(Guest Lecturer: Crystal Rose)  
Where are the opportunities? | Assignment 5 |
| Week 6 | **Final Project Presentations** | Final Project Presentations |