Udacity Connect Session

February 10, 2018

Thinking Like a Machine Learnist

Tools of the Trade

Welcome!

Morning Schedule

10:00 - 10:30	Introductions
10:30 - 11:00	Overview of Program
11:00 - 11:40	Tool up!
11:40 - noon	What are we going to learn here -- the 30,000 ft perspective

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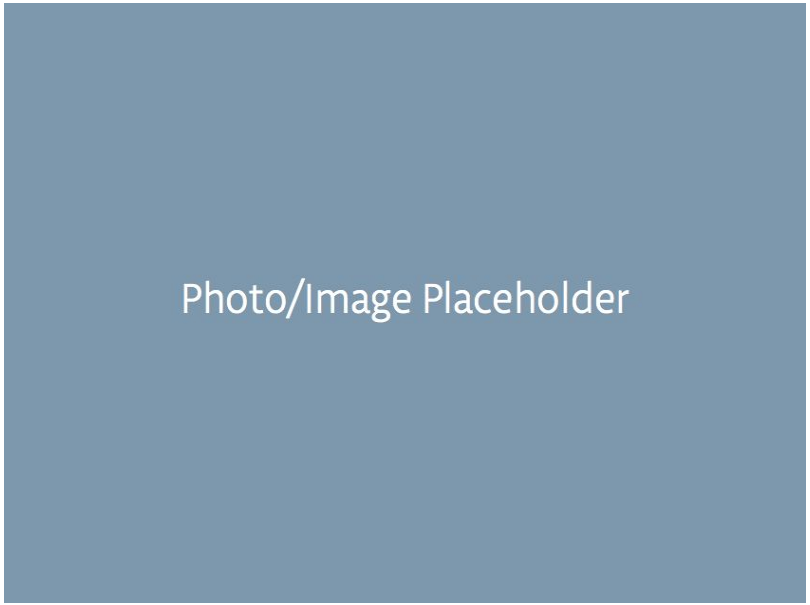
Lutfur Khundkar

SESSION LEAD

- Was born
- Happy childhood
- Came to US for college
- Studied hard, played some
- Taught Chemistry
- Develop Software for Hospitals
- Use ML/AI to improve healthcare access



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Introductions

GETTING TO KNOW YOU

- What got you interested in Machine Learning?
- What inspired you to sign up for this in-person Connect Session?
- One thing you hope to accomplish or achieve by mid-June
- One project or question you would love to be able to solve with ML

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Program Overview

WHAT DO I NEED TO DO TO COMPLETE ND?

- **Complete FIVE projects**
  - Learn the material by watching videos
  - Some outside research

- **Complete Capstone**
  - Project of your own choosing
  - Complete Proposal
  - Write a Project Report

- Boston Housing Prices
- Finding Donors for Charity
- Find customer segments
- Teach a Smartcab to Drive
- Classify images of Dogs by breed

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Program Overview

OUR PACE THROUGH THE ND IS ACCELERATED!!

Connect	Projects	Regular
21 days	Predict Boston Housing Prices	21
21 days	Finding Donors for CharityML	21
14 days	Creating Customer Segments	21
21 days	Train a Smartcab to Drive	28
21 days	Dog Breed Classifier	33
35 days	Capstone Proposal and Project	56

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Walk-through of Classroom

WHERE TO FIND THE CONTENT AND RESOURCES

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Tips for Success

HOW ARE WE GOING TO GET THERE?

- Work through the content at a steady pace (10-15 hr /wk + this session)
- Time management is a big key
- When you are stuck, ask for help
  - Udacity forums
  - Your friendly session-lead
  - Colleagues in your cohort
  - Google
- Keep track of your goal -- try not to get side-tracked on some topic
- Keep up with the recommended completion dates for projects

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Set up and Verify

LET'S GET STARTED!!

- Download Anaconda/Miniconda https://conda.io/docs/user-guide/install/index.html.
- Install Anaconda/Miniconda
- Download notebooks from Github - https://github.com/zkhundkar/ConnectIntensive
- Create environment and install libraries **`conda env create -f mlnd.yml`**
- Activate your environment **`[source] activate mlnd`**
- Navigate to the root of the folder where you downloaded the notebooks
- **`jupyter notebook`**
- Open and work through ***Getting Started.ipynb*** notebook

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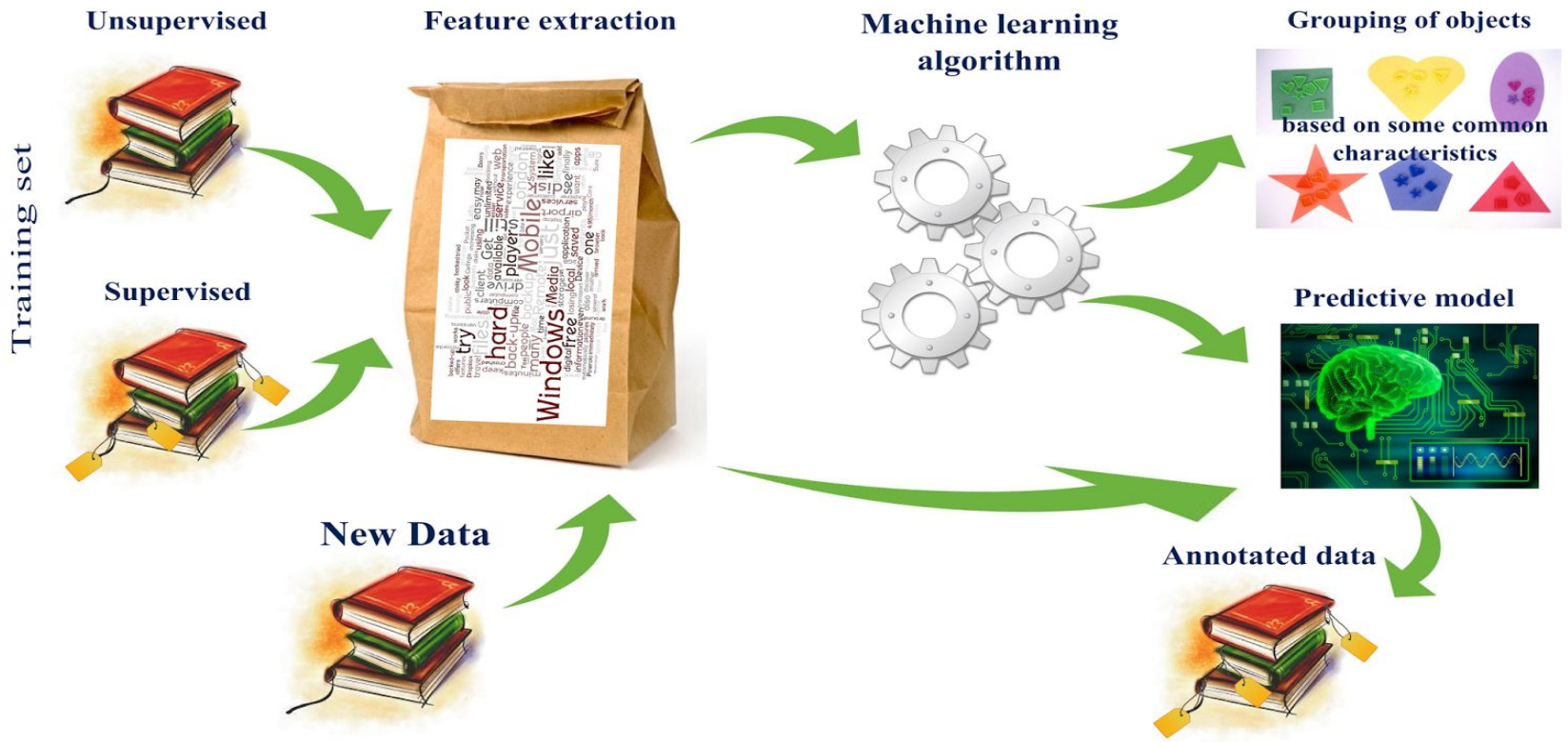
Verify your environment

Go through Getting Started notebook from Github

Machine learning workflow



http://www.computervisionblog.com/2015/03/deep-learning-vs-machine-learning-vs.html

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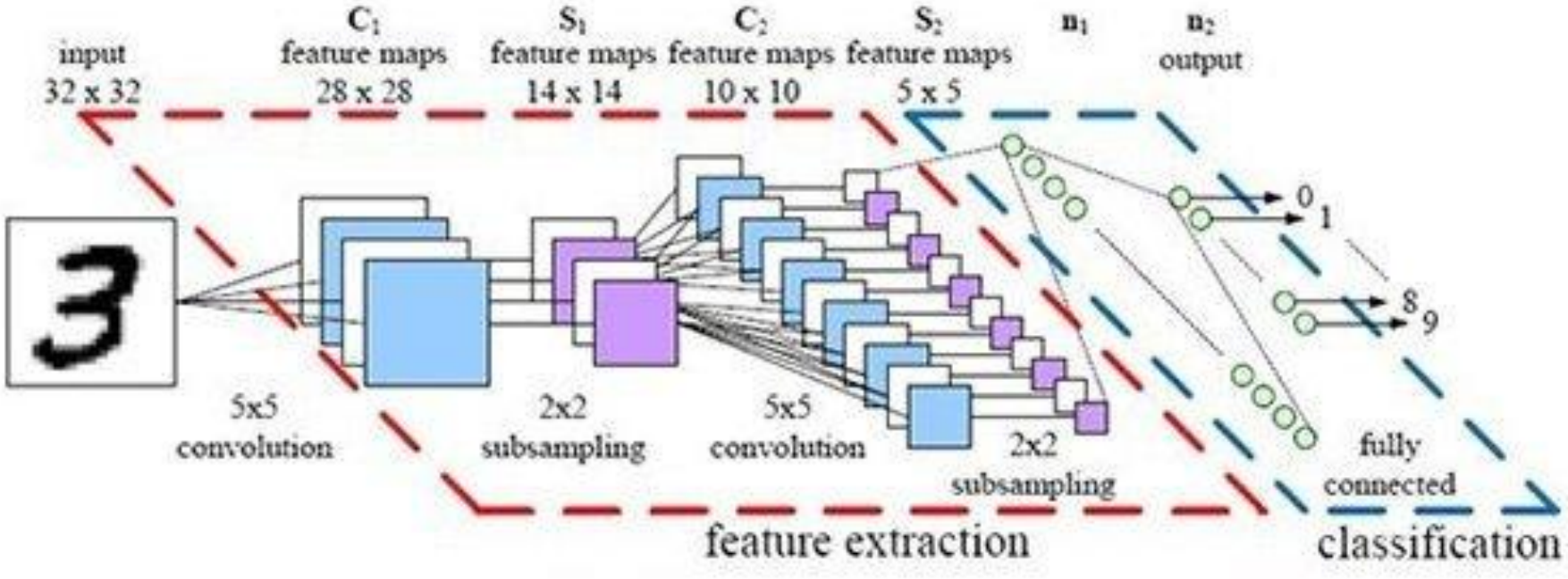

https://analyticks.wordpress.com/2016/08/06/ai-deep-learning-and-machine-learning-a-primer-andreessen-horowitz-tachyeonz/

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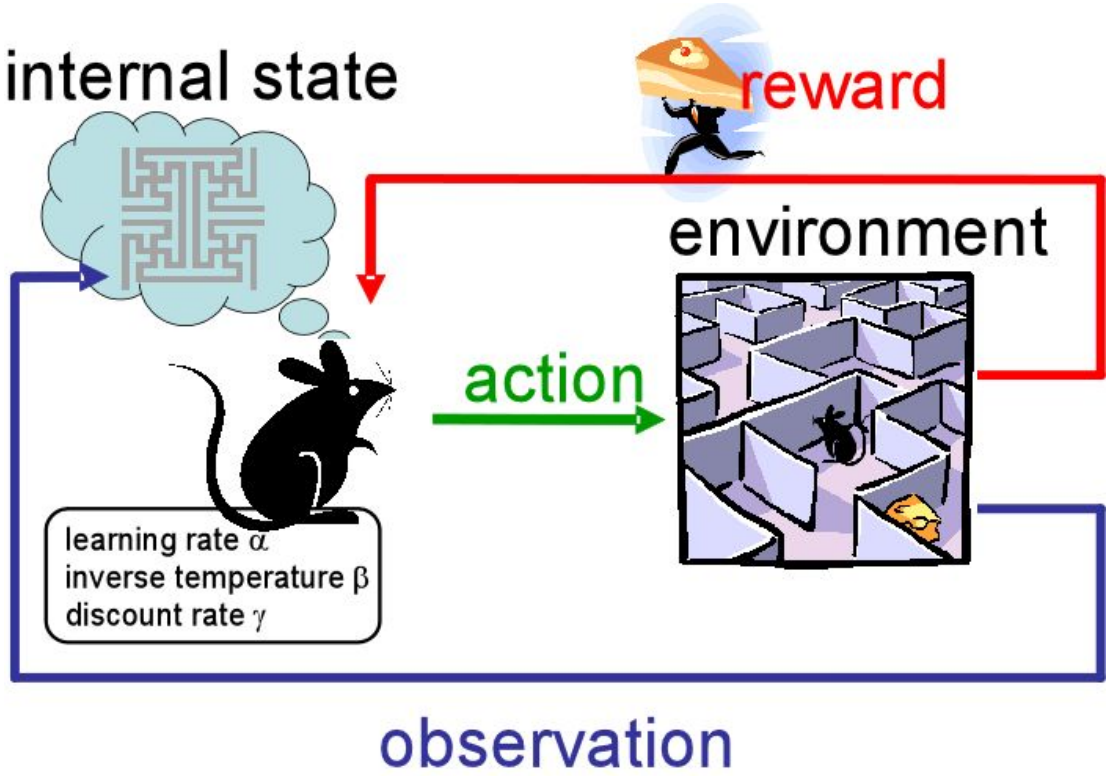
http://www.cs.utexas.edu/~eladlieb/RLRG.html/



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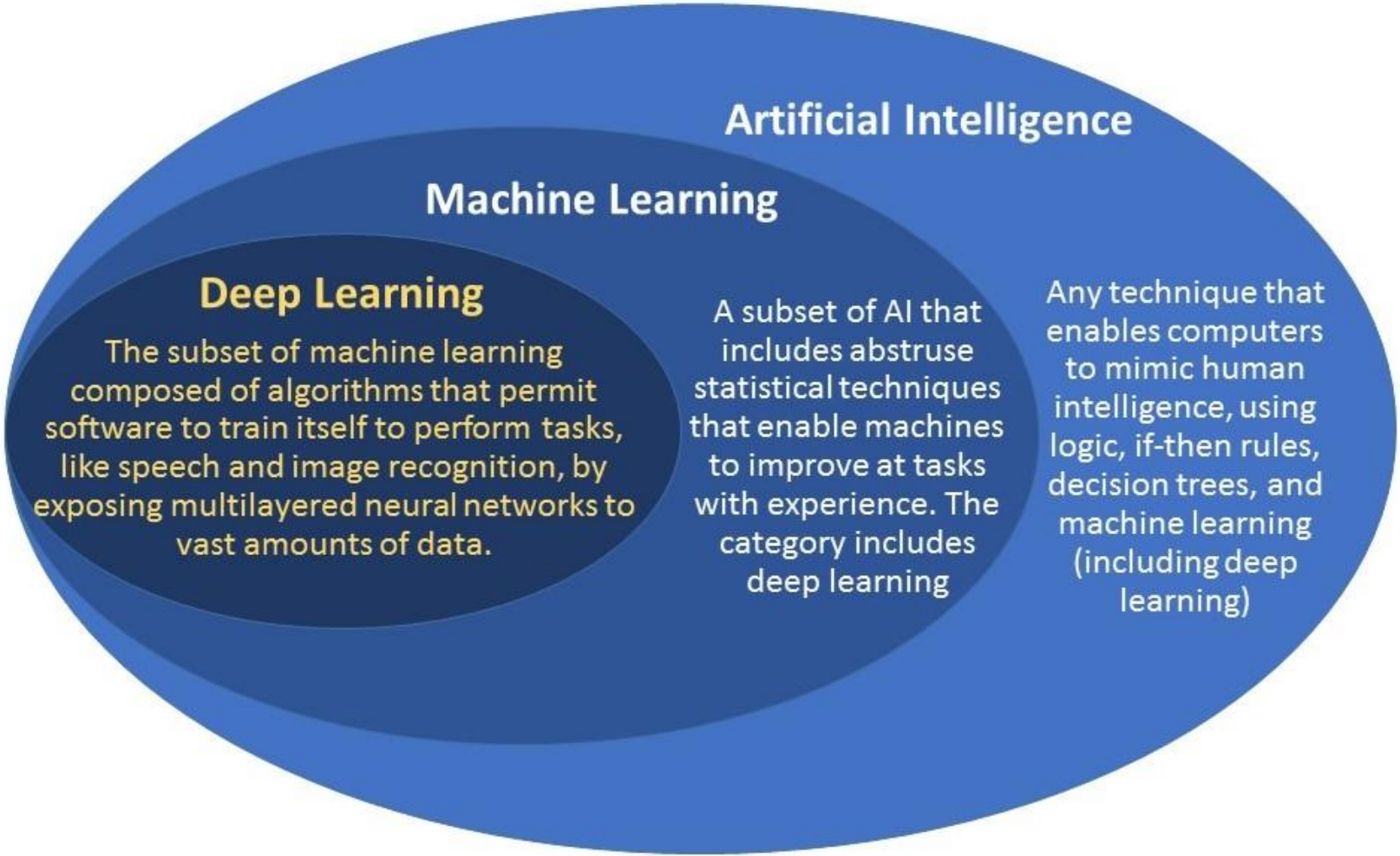

https://www.geospatialworld.net/blogs/difference-between-ai%EF%BB%BF-machine-learning-and-deep-learning/

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Lunch Break

Lets meet back here at 1:00 pm

Afternoon Session

1:00 - 1:30	Using Jupyter Notebook, numpy and pandas
1:30 - 2:00	Notebook Session - numpy, pandas
2:00 - 2:30	Session follow up and Intro to Project 0
2:30 - 3:00	Recap, Lookahead and Feedback

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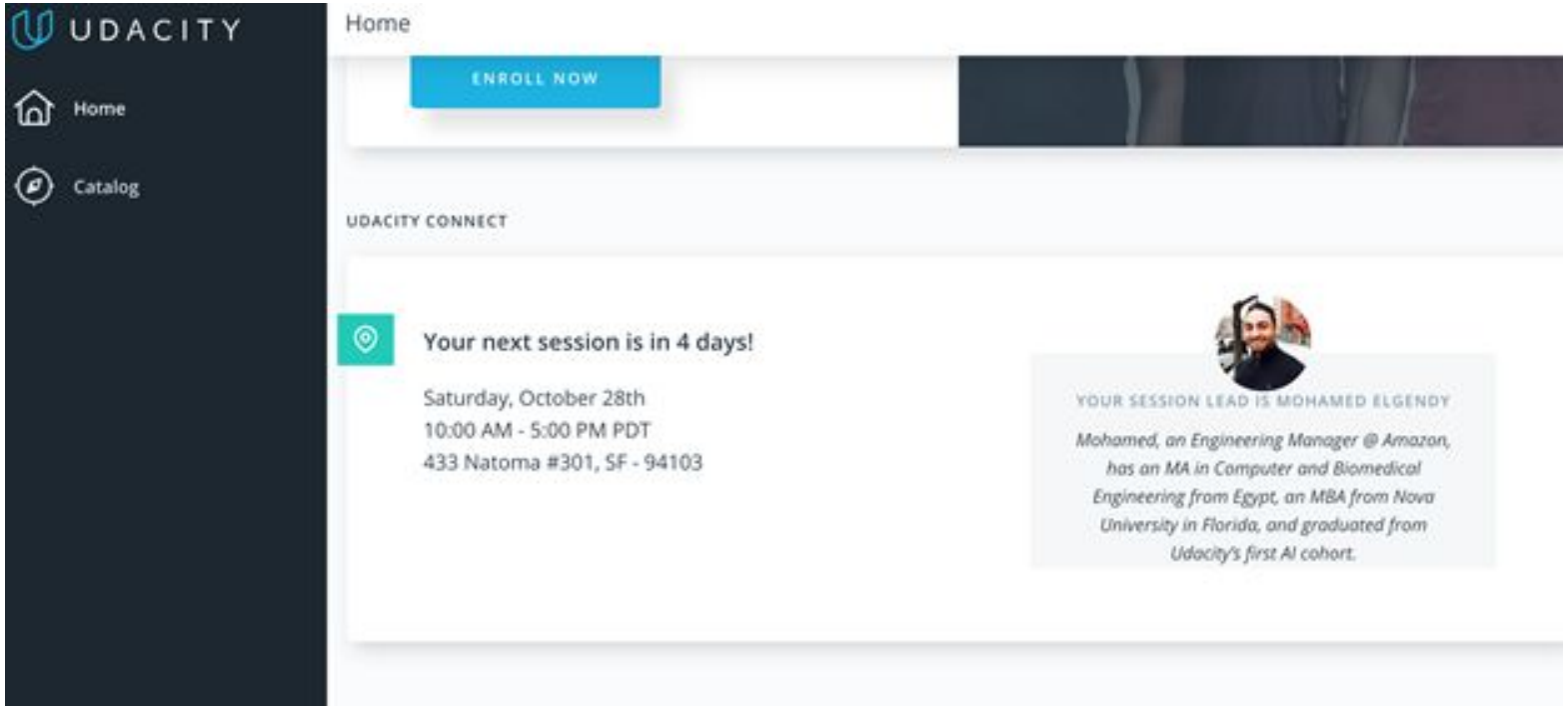
Data Exploration

Titanic Disaster Survival

We really need your Feedback!



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