

Assignments and Slides: cs35 ~ summer 2020

[cs35 homepage](#)

Things to add to future semesters (pasted at the bottom)

Module #3: Feature engineering and application areas ++++++

Final Hw: More Pixels and Projects! [Unsupervised learning](#) (Fri, July 17, weekend as buffer)

- + [Slides from Tuesday, July 7, 2020](#)
- + [Slides from Thursday, July 9, 2020](#)
- + [Slides from Tuesday, July 14, 2020](#)

Presentation Schedule:

[1] Tejas: Predictive analysis of basketball data	2020 Projects	
[2] Rachel: Analyzing color-use over time, in fashion - or another context		
[3] Anna: Downloading and analyzing iMessage data	proposed order: hour 1	
[4] Michael: Webscraping!		
[5] Ben: measure " <i>how modelable</i> " different <u>integer sequences</u> are, by NNets		
[1] Alec: measure " <i>how modelable</i> " different <u>data sets</u> are, by different ML algs.		
[2] Rhea: Van Gogh style-generator	[3alpha] Tristan: SVMs!	
[3] Adam: ETL, then analyze: a large set of Excel files		ETL: "Extract Transform Load"
[4] Melody, Dylan, Ethan: A full-stack application using Flask		
[5] Noah: from-scratch Neural network implementation (Rust!)	hour 2	
[1] Nick: Game-learning	hour 3	
[2] Daniel and Yuma: Time-series analysis of market prices ARIMA! (AAPL!!)		
[3] Akshay: Keystroke authentication!		
[4] Theresa: APIs/data of dating apps	[5] Wyatt: Face-recognition webapp!	

Hw7: NLP and Pixels and Projects: Part 1 [Images and Language!](#) (Mon. by 11pm)

- + [Slides from Thursday, July 2, 2020](#)

Hw6: *Automatic Feature*-definition [Neural networks and backpropagation](#) (Mon. by 11pm)

- + [Slides from Tuesday, June 30, 2020](#)
- + Note: the project proposal is due _Wed_, not Monday...

Module #2: Machine Learning ++++++

hw5: **Categorical** modeling (ML, part 3) [Decision trees and Random Forests](#) (Mon. by 11pm)

- + [Slides from Thursday, June 25, 2020](#)

hw4: Nearest-neighbors (ML, part 2) [the ML pipeline and "best" ML algorithm](#) (Mon. by 11pm)

- + [Slides from Tuesday, June 23, 2020](#)

hw3: Python for **Data** ~ ML part 1 [data ~ creating, visualizing, and *classifying*](#) (Mon. by 11pm)

- + [Slides from Thursday, June 18, 2020](#)

Module #1: File Fluency, on-disk and on-line ++++++

hw2: Python for Web **Output** [your own web engine: HTML, CSS, csv, regexes](#) (Mon. by 11pm)

- + [Slides from Tuesday, June 16, 2020](#)

hw1: Python for Web **Input** [requests, APIs, JSON, and Beautiful Soup...](#) (due Mon. by 11pm)

- + [Slides from Thursday, June 11, 2020](#)

hw0: Welcome back ~ to **Python** [Files! Contents and analysis...](#) (due Monday by 11pm)

- + [Slides from Tuesday, June 9, 2020](#)

Things to consider adding to future cs35 semesters:

CS final prospects: https://docs.google.com/spreadsheets/d/1BVGFbJcwCgCbLGFoontuGSSc2_ysnM5mGGeeZtly-nE/edit#gid=0
<https://thesecatsdonotexist.com/>

Yuma's illusion

Deep Dream (Maybe the following Tuesday...)

<https://github.com/awesomedata/awesome-public-datasets>

MakeoverMonday - THESE are the datasets you've been looking for!

<https://lionbridge.ai/datasets/16-strange-datasets-for-machine-learning/>

Rick and Morty API!

- + <https://rickandmortyapi.com/documentation/>

StyleGAN2: <https://towardsdatascience.com/stylegan2-ace6d3da405d>

<https://www.kaggle.com/c/deepfake-detection-challenge> Kaggle \$1M

and these:

NNets implementation: https://github.com/scikit-learn/scikit-learn/blob/master/sklearn/neural_network/multilayer_perceptron.py

for Ben: nth prime: https://www.istor.org/stable/3611701?seq=1#metadata_info_tab_contents

<https://pypi.org/project/celluloid/> for animations?

<http://www.thewebsiteisdown.com/>

"Things you can make from old, dead laptops" on youtube - amazing!

grokking algorithms

- + Bloom filter and HyperLogLog UnionFind!

Older cs35 versions:

Old [assignments and slides 2019 page](#) -- things *might* get reused, no guarantee though...

Old [assignments and slides 2018 page](#) -- things *might* get reused, no guarantee though...

Old [assignments and slides 2017 page](#) -- things *might* get reused, no guarantee though...

2016's materials seem to be somewhere we're unaware of...