Class 1:
Python for Machine Learning

SANJAY AGARWAL
SANJAY_AGARWAL@FUHSD.ORG

FUHSD ADULT SCHOOL

Pre-requisites ...

1. You should already know Python Data Analysis
2. Python programming background
3. Already using Jupyter Notebooks
4. Familiar with Pandas, NumPy, Matplotlib

Session	Class Topic	Sharing	Homework
1	Introduction – PyforDS	Python Practice Notebook	Python Practice 1
2	Large data sets Reading and Processing		Python Practice 2
3	Regression and Data Normalization		HW with regression and Normalization
4	Classification		HW Basic Classification
5	Classification with MNIST (Image Classification)		HW – Images
6	Unsupervised Learning Clustering & PCA		HW with Clustering or PCA
7	Class session on projects		
8	Capstone Project Presentations	Capstone Project	Final Project

Adding new and important topics (Open to suggestions)

Week	Homework	Percentage
1	Python Practice 1	10
2	Python Practice 2	10
3	Regression HW	10
4	Classification - Basic	10
5	Classification - Project	10
5	Project Proposals	10
6	Project with Clustering/PCA	10
7	Projects Presentations	30
	Total	**100**

Homework Expectations

- Individual submission
- Homework could take 2 to 4 hours per week
- Final project could take 5 to 7 hours
- HW Due date: End of Thursday
  - I will check all submissions on Fridays

Quick Intros …

Sanjay:

1. Data Scientist @ Solid State Battery start-up
2. Teaching Python for kids
3. Teaching ML/DL @corporate engineering
4. UCSC (Data Analytics), MBA, MSEE

@FUHSD, teaching:

1. Python for DS
2. Python for ML

Class take-aways ...

1. Working with industry standard Python tools: Jupyter Notebook
2. Working with real data sets based on industry and research
3. Build your Machine Learning portfolio on Github

4. **Goal: Ready to interview for ML positions in Silicon Valley**

QUESTIONS?