



Accelerate Course Outline: Data Science & Machine Learning – Extracting Insights from Data

Week 1

Tuesday

- Introduction to Data Science Fundamentals
 - Six V's of Data Science
 - Types of Data, accessibility and structures
- Crash Course in Python

Thursday

- Applicative Statistics with Python: NumPy and SciPy
 - Basic statistics: mean, median, mode, variance, moments
 - Probability density and distribution functions
 - Covariance and Correlation

Week 2

Tuesday

- A Quick Intro to Pandas
- Crash course on Matplotlib
 - Visualizations with Matplotlib

Thursday

- Applied Project I:
 - Analytics on a real-life dataset

Week 3



Accelerate

Unleashing Potential

Tuesday

- Applied Project I (Continued):
Analytics on a real-life dataset

Thursday

- Project Presentations:
Class/WeWork community Presentations
Feedback on presentations

Week 4

Tuesday

- Introduction to Machine Learning
Regression Analysis: Linear, Polynomial and Multivariate T-Tests
and P-Values

Thursday

- Machine Learning II
Supervised v Unsupervised Learning, Train/Test Methods K-
Means Clustering

Week 5

Tuesday

- Machine Learning III
K-Means Clustering, Decision Trees and Entropy

Thursday

- Final Project



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Unleashing Potential

Machine Learning on a real life dataset
Discussion of initial ideas and roadmaps

Week 6

Tuesday

- Final Project Continued
In-class progress updates and feedback

Thursday

- Final Project Presentations
Class/WeWork community Presentations
Feedback on presentations
- Closing Thoughts