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TOPICS COVERED

IN

THIS COURSE

PART 1 - THE MECHANICS OF ^{TOC} ① MACHINE LEARNING

- Exploring data Systematically
 - Visualization
 - investigation
- The nuts and bolts of machine learning
- Regression with a single feature
- Regression with multiple features
- Automating regression - a closer look at model hyperparameters
- Non-linear regression
- Logistic regression with 2 features
- Logistic regression with multiple features
- Non-linear logistic regression
(svms and neural networks)

PART 2 - THE SCIENCE OF MACHINE LEARNING

- Models, parameters and hyper-parameters
- Training, validation, and test datasets
- Validation Curves
- K-fold cross validation
- Measuring model bias and variance

TOC ③

PART 3 - THE ART OF MACHINE LEARNING

- Feature compression
- Feature engineering
- Decision trees
- Ensemble of models - Decision trees, random forests, aggregation of results

PART 4- SELECT TOPICS IN MACHINE LEARNING

- Similarity and clusterings
- Profiling and anomaly detection
- Learning from text
- Recommender Systems

