- Introduction to Machine Learning
- 2. Intro to Scikit-learn
- 3. Predictors
- 4. Transformers and Pipelines
- 5. Feature Unions
- 6. Custom Transformers
- 7. Custom Predictors
- 8. Exercise Distance Transformer
- 9. Exercise Majority Classifier
- 10. Persisting Your Model
- 11. Common Mistakes
- 12. Regression Metrics
- 13. Linear Regression Intro
- 14. Gradient Descent and Huber Loss
- 15. Multivariate Regression
- 16. Feature Importance
- 17. Classification Metrics
- 18. Probabilistic Models and Metrics
- 19. <u>Logistic Regression</u>
- 20. Multiclassification
- 21. Model Selection
- 22. Intro to Decision Trees
- 23. Underfitting and Overfitting
- 24. GridSearchCV
- 25. Comparing Two Models
- 26. Imputation
- 27. Categorical Data
- 28. GridsearchCV and Pipelines 1
- 29. GridsearchCV and Pipelines 2
- 30. RandomizedSearchCV
- 31. Feature Engineering and Extraction
- 32. Feature Transformation
- 33. Curse of Dimensionality
- 34. Regularization
- 35. Multicollinearity and PCA
- 36. Ensemble Models
- 37. Bias and Variance
- 38. Learning Curves
- 39. Intro KNN
- 40. KNN Bias and Variance
- 41. KNN Time Complexity
- 42. KD Trees and Weights
- 43. Intro to NLP

- 44. <u>Spacy</u>
- 45. Obtaining a Corpus
- 46. Bag of Words Model
- 47. Hashing Vectorizer
- 48. TF-IDF
- 49. Improving Signal
- 50. N-grams and Similarity
- 51. Word Usage Classifier
- 52. Exercise I
- 53. Exercise II
- 54. Exercise III and IV
- 55. Intro to Decision Trees
- 56. Tree Error Metrics
- 57. Trees for Regression
- 58. <u>Training Trees and Hyperparameters</u>
- 59. Geometric Interpretation and Time Complexity
- 60. Time Complexity Continued
- 61. Random Forests
- 62. Extreme Random Forests
- 63. Gradient Boosting Trees I
- 64. Gradient Boosting Trees II
- 65. Feature Importance
- 66. Exercises
- 67. Intro to SVM
- 68. Largest Margin Classifier
- 69. Soft Margin Classifier
- 70. SVM Kernels
- 71. SVM vs Logistic Regression
- 72. SVM Regression
- 73. SVM Lagrangian Dual
- 74. Kernel Trick
- 75. SVM Time Complexity and Multiclass
- 76. SVM Tuning Kernels Exercise Part I
- 77. SVM Tuning Kernels Exercise Part II
- 78. SVM Kernel Approximations
- 79. SVM Online Learning
- 80. SVM Online Learning Pipeline
- 81. Intro to Clustering
- 82. Metrics for Clustering
- 83. KMeans Clustering
- 84. Elbow Plots
- 85. Gaussian Mixture Models
- 86. Choosing Cluster Based on Silhouette

- 87. GMM Choosing Number of Components
- 88. Intro to Time Series
- 89. Crossvalidation in Time Series
- 90. Stationary Signal
- 91. Modeling Drift
- 92. Fourier Transforms Part I
- 93. Fourier Transforms Part II
- 94. Fourier Components in our Model
- 95. Modeling Noise
- 96. Moving Statistics
- 97. Full Model
- 98. ARMA and ARIMA
- 99. AR Example
- 100. Intro to Dimension Reduction
- 101. Math of Projections
- 102. PCA
- 103. PCA in Scikit Learn
- 104. PCA Implementation Details
- 105. Choosing the Number of Components
- 106. Truncated SVD
- 107. <u>NMF</u>
- 108. <u>Using PCA with Supervised ML</u>
- 109. PCA for Visualization
- 110. NMF Exercise Part I
- 111. NMF Exercise Part II
- 112. Variants of PCA
- 113. Intro to Anomaly Detection
- 114. One class SVM
- 115. Isolation Forest
- 116. Comparison Between One-class SVM and Isolation Forest
- 117. Intro to Case Study
- 118. Initial Baseline Model Part I
- 119. Initial Baseline model Part II
- 120. Full Baseline Model
- 121. Z-score Detection
- 122. Rolling Z-score Detection
- 123. Using External Features Initial Model
- 124. Using External Features Tuning the Model
- 125. Packaging the Time Series Anomaly Detector
- 126. Model Considerations
- 127. <u>Model Development</u>
- 128. Flask App Local Development
- 129. GET requests

- 130. Making GET Requests with Model
- 131. <u>Using our Model with Twitter Web API</u>
- 132. POST Requests and Flask Templates
- 133. Preparing for Deployment to the Web
- 134. Deploying our App to the Web with Heroku
- 135. Rethinking Model Tuning
- 136. <u>Intro to Bayes Theorem</u>
- 137. <u>Bayesian Inference</u>
- 138. <u>Bayesian Optimization</u>
- 139. End of Course Material
- 140. OFFICE HOURS PLAYLIST