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ECE - Artificial Intelligence & Big Data Concentration

- New track in AI & Big Data area
- Applied Artificial Intelligence, Machine Learning, Deep Learning, Big Data , Visualization, IoT Edge and Cloud Computing
- Undergraduate and graduate level courses
- Six courses in each level
- Offered as elective

ECE-Artificial Intelligence & Big Data Graduate Level Courses

CNT 6154: Advanced IoT Applied Machine Learning

CNT 6148: Advanced IoT & Sensor Big Data Analytics

CNT 6156: Advanced IoT & Sensor Programming with Python

CNT 6150: Advanced Sensor & IoT Data Analysis with Deep learning

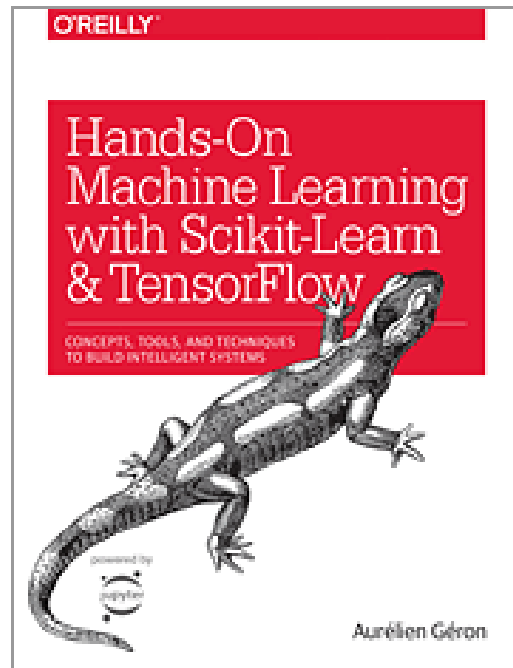
CNT 6152: Advanced IoT & Sensor Data Visualizations

CNT 6144: Advanced IoT & Analytics with Cloud Services

CNT 6154 Advanced Applied Machine Learning (Graduate)

- Course Introduction
- Introduction to Machine Learning
- Supervised Learning & K-Nearest Neighbors
- Train/Test, Validation and Linear Regression
- Logistic Regression and Classification Error Metrics
- Regularization & Gradient Descent
- Naïve Bayes and Grid Search Pipelines
- SVM and Kernels
- Decision Trees
- Bagging / Ensemble Learning
- Boosting and Stacking
- Unsupervised Learning & K-Mean Clustering
- Dimensionality Reduction & Advanced Topic
- Research Project / Class Presentation

Course Book / Syllabus



Hands-On Machine Learning with Scikit-Learn and TensorFlow

Concepts, Tools, and Techniques to Build Intelligent Systems

By [Aurélien Géron](#)

Publisher: [O'Reilly Media](#)

Release Date: March 2017

ISBN-13: 978-1491962299

ISBN-10: 1491962291

Advanced Machine Learning Syllabus / Canvas Content

Course Grading

Graduate Course: CNT 6154

Assignments/Quiz – 20%

Mid-term – 30%

Final Exam- 30%

Research Project – 20%

Additional Credits:

Class Attendance