



3 Courses

Introduction to Machine Learning: Supervised Learning

Unsupervised Algorithms in Machine Learning

Introduction to Deep Learning



University  
of Colorado  
Boulder

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**Garrett Bainwol**

has successfully completed the online, non-credit Specialization

# Machine Learning: Theory and Hands-on Practice with Python

In the Machine Learning specialization, we will cover Supervised Learning, Unsupervised Learning, and the basics of Deep Learning. You will apply ML algorithms to real-world data, learn when to use which model and why, and improve the performance of your models. Starting with supervised learning, we will cover linear and logistic regression, KNN, Decision trees, ensembling methods such as Random Forest and Boosting, and kernel methods such as SVM. Then we turn our attention to unsupervised methods, including dimensionality reduction techniques (e.g., PCA), clustering, and recommender systems. We finish with an introduction to deep learning basics, including choosing model architectures, building/training neural networks with libraries like Keras, and hands-on examples of CNNs and RNNs.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Geena Kim  
Adjunct Professor  
Computer Science

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