

# Intro to Machine/Deep Learning with Keras: Applications in the Geosciences

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February 18, 2019

This informal seminar will introduce basic concepts in Python programming and data-driven model development using the Keras deep learning framework.

**Meeting Room/Time:** BSB D408 10 a.m.–12 p.m.

**Materials:** <https://github.com/katherbreen/deep-learning-seminar>

**Videos:** <https://www.youtube.com/channel/UCUz0WTNyfTWyAAmiz-Gxnjg>

Date	Topic
February 1	Introduction to Python syntax, best practices, simple demos.
February 15	Introduction to neural networks, overview of physics-based vs. data-driven models.
March 1	Preprocessing, regularization, and hyperparameter tuning.
March 15	Spring Break
March 22	Development of a simple physics-based model and adaptation to a data-driven framework with Keras.
April 5	TBA
April 19	Easter Break
April 26	TBA
May 3	TBA (last day of classes)