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Other - Computational Biology Seminar Series

An Introduction to Deep Learning and Its Applications in Evolutionary Biology**Lex Flagel, University of Minnesota**Adjunct Professor, Department of Plant and Microbial Biology and Bayer Crop Sciences
Research ScientistDigital Media Center 1034
April 08, 2019 - 04:30 pm**Abstract:**

Deep learning is an exciting new technology that powers things like self-driving cars and voice assistants. The success of deep learning methods comes from that fact that they are exceptionally powerful at pattern recognition. These methods are starting to catch on in biology too, especially in genomics where we often want to detect patterns in DNA sequences. In this talk I first provide a primer on deep learning methods. The goal of this primer will be to give you a gentle introduction to how deep learning models are built and trained. Then I will present some recent examples where colleagues and I used deep learning to make inferences in population genetics.

Speaker's Bio:

I am an adjunct professor in the Plant and Microbial Biology Department at the University of Minnesota. I am also a research scientist at Bayer Crop Sciences. At Bayer my work is focused on developing new methods to accelerate crop breeding, and in my faculty role I work on problems in deep learning and population genetics. In both cases I use genomic technologies to create large amounts of data, and computational and statistical approaches to gain insights.

