

**Team Number:**

**School Name:** Espanola Valley High School

**Area of Science:** Computer Science / Neural Science

**Project Title:** Birds and Deep Learning.

The human brain is made up of approximately 10 billion neurons and 6 Cortex Layers. In this year's challenge, we have decided to analyze this network by applying sound recognition and learning the difference between those layers. We will investigate the fundamentals of deep learning. In particular, the rate of learning and how different "weights"(input) depict how we learn (the output).

There are 34 bird species in New Mexico, which is a lot. However, this only includes birds that have established and self-sustaining populations. One of the more popular birds is our state bird; the road runner. We would like to mix neural networks and birds together. To accomplish that, we will work together to create a Net Logo simulation that will learn bird sounds and can recognize which sounds belong to which birds.

**Team Members**

- Joshua Fresquez
- Alicia Fresquez
- Steven Gallegos
- Raymond Navarro
- Angel Gonzales

**Sponsoring Teacher(s)**

- Steve Cox
- Josephine Kilde

**Project Mentor(s)**

- Florian Castillo III
- Joseph Fresquez
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