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Type: **Talk**

## Large Scale Computations in Data Science

*Wednesday, 2 December 2020 14:00 (30 minutes)*

The Data Science Research Group is engaged in a broad spectrum of data science problems ranging from theory to computations to applications.

The computations and applications in particular required HPC resources. In particular, the implementation of a special neural network referred to as the Error Correction Neural Network (ECNN) was a computation project that required HPC for testing. Application examples include accident detection from traffic videos, and the localization of lesions in Diabetic Retinopathy.

The HPC requirements of these projects included storage for the data and compute resources, both CPU and GPU, for the deep learning models being used.

At the beginning the challenge was the lack of GPUs, but it became more about software packages required by the constantly changing implementations of these deep learning models.

The talk will showcase research results and impact that were made possible by access to CHPC computing resources.

### **Student?**

No

### **Supervisor name**

### **Supervisor email**

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**Track Classification:** HPC Techniques and Computer Science