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## Technical Skills

*Languages:* Python, Matlab, SQL, Java, C++

*Frameworks/Libraries:* Scikit-learn, NumPy, SciPy, Pandas, matplotlib, Keras, Theano, Hadoop/HDFS/MapReduce, Unity, Arduino

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## Projects

### Credit Card Fraud Detection - <https://github.com/sunnyks/credit-card-fraud-detection>

- Used SMOTE (Synthetic minority oversampling) and ensemble learning/neural network on a highly imbalanced dataset of credit card transactions to classify them as fraudulent or legitimate with F1 score of 0.9998

### Human Activity Recognition - <https://github.com/sunnyks/Human-Activity-Recognition-with-Smartphones>

- Used neural network to classify human activity (such as sitting, walking, walking upstairs, etc) using accelerometer and gyroscope data from a smartphone on the subject's person with accuracy of 96.27% using Keras

### Breast Cancer Diagnosis - <https://github.com/sunnyks/Wisconsin-Breast-Cancer-ML>

- Used ensemble learning methods to perform supervised classification on cell nuclei dataset to diagnose breast cancer with 98.8% accuracy (F1 score of 0.9913) using Python 2.7 & Scikit-learn

### Swiss Tournament Planner - <https://github.com/sunnyks/Swiss-Tourney-SQL>

- Wrote a program to help plan/run a Swiss-style tournament using PostgreSQL & Python

### Fast Fourier Transform implementation - <https://github.com/sunnyks/FFT>

- Wrote simple/minimal real time FFT/IFFT implementation optimized for real inputs in C

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## Experience

### Udacity – Deep Learning Project Reviewer

January 2017-Present

- Review student project submissions (deep learning/neural network projects) and give helpful, actionable, and elucidating feedback
- Developed ability to communicate technical information clearly and concisely

### Georgia Tech Electronic Percussion Ensemble

2014

- Worked with team of 5 to design, build, program, and perform with electronic instruments (using arduino/C) i.e. electronic harp which worked via capacitive touch

### Habitat for Humanity + House Proud – Volunteer Work

2011-2015

- Worked with team of ~15 on construction of homes for low income families with Habitat for Humanity
- Worked with a team of 5 doing home maintenance and repair for veterans and elderly with House Proud

### Red Cross Blood Drives – Sponsor & Volunteer

2012-2015

- As a member of Delta Sigma Phi, official Red Cross sponsor at Georgia Tech, was responsible for organizing and advertising for two blood drives a year, as well as scheduling donors and assisting doctors when needed

### Tutor

2010-2013

- Met twice a week with students from local schools to provide additional instruction to help them with academics. Specialized in teaching math and sciences

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## Education

Udacity – Machine Learning Engineer Nanodegree

Georgia Institute of Technology – Physics, B.S.