TERRENCE EDMONDS

(813)-838-2025
terrenceedmonds31@gmail.com

GitHub:
/Terrence-Job-Code

Linkedin:
/terrence-edmonds-3a83a7148

Website:
terrence-edmonds-site.netlify.com

2101 Cumberland Ave
Apt 1104
West Lafayette, IN
47906

Education

Purdue University, West Lafayette, IN — MSc Physics, 2020

- Emphasis on **computational methods** and **machine learning**
- GPA: 3.7

University of Florida, Gainesville, FL — BS Physics, 2015

Experience

Research Assistant, Purdue Physics; West Lafayette, IN — 2016-2019

- Used **C++** and **ROOT** libraries to transform large complex data sets into smaller datasets for faster analysis time and smaller data storage
- Used **regression** and **statistical** analysis techniques to extract, fit, and transform raw data
- Developed **bash** scripts to automate time consuming and repetitive tasks
- Performed QA on data to verify its integrity
- Developed and tested data analysis **algorithms** based on techniques described in papers
- Used **large computer clusters** to perform parallel analysis and analyze **TB data**
- Created and presented **visuals** of analysis and explained techniques used for analysis

Backend/Database Developer, PolySci

- Designed **database** structure and deployed it using **Firebase** and Python
- Constructed and maintained the **data pipeline** (gathering, cleaning, uploading)

Description of Research

At Purdue, I was apart of High Energy Nuclear Physics group where we studied the dynamics of a state of matter called Quark Gluon Plasma (QGP). My research primarily involved studying a resonance called f0(980) using background subtraction techniques and modeling the shape of the resonance to understand how it behaves in the plasma. These dynamics were then compared to other well understood resonances to observe which class of particles it behaved like.

Class Projects

Deep Learning Projects

- Built and compared the effectiveness of fully connected, convolutional, and denoising autoencoder models using Keras
- Built a GAN network in Keras
- Compared the effectiveness of adversarial attacks (Fast Gradient Method, Projected Gradient Descent, Carlini and Wagner Attack, and DeepFool)

Solar Wind Simulation

- Wrote a 1D fluid solver to simulate solar winds from the sun using an Eulerian fluid model

Ongoing Projects

Face Identification

- Built model to identify faces with 85% accuracy using Resnet

Stock Prediction from News

- Built webscrapers to collect news data from various websites

Skills

C++, C, Python, Bash, Matlab, Big Data Analysis, Mathematical and Statistical Modeling, Sklearn, Tensorflow, Machine Learning, Data Mining, noSQL, Firebase