Yunmei Zheng

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Education

University at Buffalo Buffalo, NY

Bachelor of Science, Engineering Science *September 2019 – May 2023*

- Courses: Applied Probability and Statistics, Introduction To Data Science, Statistics for Engineers

Experience

Electrical Engineering Intern June – August 2022

Syska Hennessy Group *NYC, NY*

- Coordinated and collaborated with engineers from different fields and companies in similar trade
- Assisted engineers with a wide variety of projects using AutoCAD and Revit
- Performed load calculations for an airport and created single line drawing and schematics
- Data entry for lights and wires into Excel and AutoCAD

General Contracting Intern May – August 2018

CONDE LLC. *NYC, NY*

- Scheduled and coordinated groups of small meetings and appointments for supervisors with contractors
- Greeted visitors and helped them find the appropriate person or schedule an appointment
- Assembled research for future projects, designed and improved PowerPoints for upcoming projects

Projects

Impossible Project | *Python* January 2023 – Present

- Project about how various aspects of machine learning algorithms and society interact and how to apply it to end white supremacy

Quantum Computing,Concord Consortium | *Python, Qiskit* November 2020 – Present

- Creating a game that has a physical component to aid highschooler in better comprehending quantum mechanics.

Machine learning for River Forecasting, US Army | *Python, R* October 2022 – January 2023

- Creating a model that can be used to accurately forecast flow at various locations along the Genesee River, given inputs of observed river, precipitation gauge data and forecast precipitation.

Demographics and Air Quality in NYC | *R, RShiny* August – December 2022

- Cleaned and proceeded two datasets to determine the area that has the highest concentration of pollutants as well as the demographics within that area by using different models.

Supervised Machine Learning and Motion Sensors | *Google Colab, Excel* February – April 2022

- Assessed model accuracy in classifying handwritten digits from the MNIST database by tuning hyperparameters C and gamma to optimize the performance of the SVM classifier.
- Conducted an experiment using Vicon systems to capture data on the projected route path of the object and the user's body joint position when throwing. Analyzed the data to establish the individual performance accuracy by determining optimal throwing motion and velocity.

Force Sensor and Prosthetic Hand Control | *Arduino, Excel, Matlab* September – November 2021

- Optimized the operation of a production system through a black box experiment using two sensors. Regression model was used to assess the generated data, and representative system models were developed to identify the best configurations to optimize the result.
- Assessed the suitability of an EMG sensors as a potential sensor for controlling a prosthetic device. Acquire muscle actuation data for different upper limb movements and muscles. Mapped muscle actuation data to specific prosthetic movement with the help of a servomotor as a proxy to comprehend sensitivity and control.

Technical Skills

Languages: Python, R, MATLAB, SQL, C/C++, HTML/CSS, JavaScript
Machine Learning: Classification (Logistic Regression, Decision Tree), Clustering (K-Means)
Libraries: ggplot2, Rshiny, Pandas, NumPy, Matplotlib
CAD: AutoCAD, Civil3D, Fusion360, SolidWorks, Revit