Aashin Shazar

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EXPERIENCE

Undergraduate Research Assistant   Feb. 2020 - Present
Intelligent Computing and Embedded Systems Lab | San Francisco, CA

- **Spearheaded Python development** of rapid sensor fault recovery in prosthetic research.
- Optimized implementation of prototype **MATLAB** code in **Python** with a **98% performance gain**.
- Designed new features for parameter investigation to boost **classifier accuracy from 20% to 93%.**
- Built a real time application of sensor fault recovery on a GPU featuring a **5x speedup** over CPU.

Engineering Intern   May. 2017 - Aug. 2018
Tesla | San Francisco, CA

- Developed a **$3.75M cost saving machine learning application** to yield greater process efficiency.
- **Created data pipeline** to visualize KPIs for 15 crash safety critical automotive components.
- **Redesigned data acquisition software** to integrate production vital equipment into the data pipeline.
- Utilized **automated report generation** to capture daily ongoing quality issues for 2 production lines.

EDUCATION

San Francisco State University | Bachelor of Science in Computer Engineering   Dec. 2020

- Capstone: Development of Sensor Fault-Tolerant Module for High-Density EMG Pattern Recognition
- Activities: Vice President of Alpha Sigma Phi

Udacity | Machine Learning Engineer Nanodegree Certificate   Sep. 2018

- Capstone: Application of Convolutional Neural Networks to Identify Defective Automotive Components
- Coursework: Supervised Learning, Unsupervised Learning, Deep Learning, Reinforcement Learning

PROJECTS

Python Seminar: Intro to Business Applications
Tech Used: Python, Data Science, Jupyter Notebook   Nov. 2020

- ashazar.me/projects/seminar
- This Python Seminar was conducted at San Francisco State University and introduced **Python** to solve business applications. We looked at the usage of libraries such as **numpy**, **pandas** and **matplotlib** to do a simple **linear regression** case study, plot the relationships and generate a report of the findings.

E.M.I.L.A (Electromyography Muscular Interface Limb Assist)
Tech Used: Microcontrollers, C, Machine Learning   Oct. 2019

- ashazar.me/projects/emila
- EMILA was a cursory investigation into robotic prosthetics. This project gathers EMG data from EMG sensors which is then interpreted by a **machine learning classifier** to perform a previously mapped gesture with the help of a **microcontroller programmed in C.**

TECHNICAL SKILLS

Programming: Python, MATLAB, C/C++, Java, Verilog, Simulink

Data Science: Numpy, Scipy, Pandas, SQL, Matplotlib, Jupyter Notebook

Machine Learning: Keras, Sci-kit Learn, Tensorflow, JAX, HyperOpt, Ray

Hardware: Raspberry Pi, Jetson TX2, Arduino, PSOC, Altera Cyclone V