Aashin Shazar

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EXPERIENCE

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

- Spearheaded **Python implementation** of a rapid sensor fault recovery **machine learning algorithm**.
- Developed a **data science tool** to aid with the research and investigation of high-density EMG data.
- Optimized implementation of **prototype MATLAB** code in **Python** with a **98% performance gain**.
- Researched new features for parameter optimization to boost **classifier accuracy from 20% to 93%.**
- Experimented with a sensor fault recovery implementation on a GPU featuring a **5x speedup** over CPU.

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

- Prototyped a **$3.75M cost saving machine learning application** to yield greater process efficiency.
- Created **data pipeline in Python** to integrate vital manufacturing equipment into **SCADA software.**
- Integrated legacy data processing systems into **data pipeline** to offer **100% data analysis coverage**.
- Managed complete **live dashboard KPI visualization** for 15 crash safety critical automotive components.
- Generated **automated reports with SQL** to analyze crucial manufacturing issues for 2 production lines.

EDUCATION

San Francisco State University | Bachelor of Science in Computer Engineering Aug. 2018 - Dec. 2020

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

Udacity | Machine Learning Engineer Nanodegree Certificate Oct. 2018

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

PROJECTS

Python Seminar: Intro to Business Applications Nov. 2020
ashazar.me/projects/seminar | Python and Data Science

- Conducted a seminar for **over 30 students** introducing **Python** and its various **data science** libraries.
- Showcased the convenience **of Jupyter Notebooks** for both **report generation** and **data analysis**.

E.M.I.L.A (Electromyography Muscular Interface Limb Assist) Oct. 2019
ashazar.me/projects/emila | Hardware, C, and Machine Learning

- EMILA was a **machine learning** project that can predict gestures from EMG sensor data.
- Leveraged a **microcontroller programmed in C** to control a prosthetic arm and perform gestures.

ReelLife Mar. 2019
ashazar.me/projects/reellife | Python and Machine Learning

- ReelLife was a **hackathon project** aimed at content creators to automate finding highlight shots from videos.
- Demoed a **machine learning classifier** that can find the best "action shots" from any YouTube video.

TECHNICAL SKILLS

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

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

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