RYAN SHAPPA

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SKILLS

Software: Python, C++, JavaScript, Shell, SQL, Microsoft Office (Word, Excel, PowerPoint), Git/GitHub, MacOSX, Unix/Linux, Windows
Modules/Libraries: PyQT, React, NodeJS, Pytorch, NEAT, Node.JS, NumPy, Tensorflow, OpenCV, Mediapipe
Professional: Inter-personal, Communication, Collaboration, Presentations, Problem Solving, Teamwork, Adaptive, Spanish Speaking

WORK EXPERIENCE

Poolin Mining — Austin, Tx

Software Engineer — *January 2022-July 2022*

- Lead a team of technicians to monitor the site, troubleshoot problems with miners, repair miners, implement new methodologies to maintain miner uptime
- Wrote and uploaded Python API's using Git to automize miner maintenance and improve bitcoin mining hashrate
- Collaborated with software engineers to make improvements to user-interface and back-end framework of monitoring software using JavaScript in a Linux environment
- Worked with a team of software engineers to create a UI using React to show database of MySQL data sets to interpret and compare real-time and day after market electricity prices from Texas grid

Exelon Nuclear — Morris, IL

Intern – Engineer — *June 2020-August 2020*

- Collaborated with team of interns to establish the fundamental design considerations and research for remote monitoring devices to be installed for remote plant use
- Analyzed Python code, schematics of electronics, and physical parts to make design improvements to the monitoring devices
- Strengthened ability to delegate tasks and work jointly with other engineers to meet the requirements of an interdisciplinary project

Fermi National Acceleratory Laboratory — Batavia, IL

Intern-Department of Energy, Visiting faculty program — *May 2019-February 2020*

- Developed custom design using SolidWorks for an electronics closure using, multiple hall probe holders, and a fixed-mount to be 3D-printed for implementation
- Used lab equipment (Oscilloscope, DMMs, spectrum analyzer, function generator, power supply, etc.) for measurements
- Deployed unit tests to acquire data from magnetometer using MicroDAQ library for Python programming interface

PROJECTS

Flappy Bird with Machine Learning AI (NEAT)

Personal Project — *January 2022*

- Programmed Flappy Bird game using Pygame and incorporated a Genetic machine learning algorithm (NEAT) as well as other Python modules to have the computer learn how to play the game
- Created game version for human to play, or computer AI version which will train itself to improve using neural networks
- Researched neural networks, TensorFlow, and machine learning algorithms to create this project

Self-Balancing Robot Race

Control Theory Competition/Project — *Spring 2021*

- Used Agile framework to fabricate and program self-balancing robot to undergo a race task
- Programmed robot a series of tasks to stand up, balance, race 10 feet without falling, and balance again using a RaspberryPi microcontroller coded with Python and Pytorch framework
- Used OpenCv and Mediapipe module for video processing computer vision for robot to stop upon sight of a stop hand gesture

Dynamometer

Capstone Project — *Fall 2021*

- Designed, programmed, tested, and constructed Dynamometer to take various measurements on a generator
- Performed a needs analysis to initiate conceptual design and bill of material
- Programmed and wired multiple Arduino's with C++ for a graphical user interface (GUI) to incorporate user friendly experience

EDUCATION

North Central College — Naperville, Illinois

Bachelor of Science in Computer Engineering & Applied Physics, Minor in Mathematics. — September 2017 – December 2021