RYAN SHAPPA

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SKILLS

Software: Python, C++, JavaScript, Java, HTML5, CSS, Bash/Shell, SQL, Microsoft Office (Word, Excel, PowerPoint), Git/Github
Moodules/Libraries: PyTorch, Pytest, OpenCV, REACT, NEAT, Numpy, Pandas, Tensorflow, REST
Professional: Inter-personal, Communication, Collaboration, Presentations, Problem Solving, Teamwork, Adaptive, Spanish Speaking

WORK EXPERIENCE

Poolin Mining — Austin, Tx

Software Engineer — *January 2022-July 2022*

- Led a team of technicians to monitor the site, troubleshoot problems with miners, repair miners, implement new methodologies to maintain miner uptime
- Maintained company's customer faced web application using Java Spring framework with Git/Github version control to make updates enabling simple client use
- Collaborated with software engineers using an agile framework to make improvements to the UI/UX of miner monitoring software web API using JavaScript in a Linux environment to automize miner maintenance and improve bitcoin mining
- Worked in a team setting to develop a GUI using JavaScript REACT to show MySQL datasets 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 programming remote monitoring devices to be installed for remote plant use
- Analyzed Python code, schematics of electronics, and physical parts to make design improvements and engineering changes to be approved for installation of the monitoring devices
- Performed code reviews with mentors to enhance the ability to write clean and manageable code for deployment

Fermi National Acceleratory Laboratory — Batavia, IL

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

- Created simulations using Virtual Python to program advanced mechanic motion simulations to then implement the same scenarios but in the quantum mechanics setting
- Worked with a team of interns to create queries in SQL from accelerator data sets to be interpreted
- 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 win 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 root cause analysis 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 module
- Used OpenCv module for video processing computer vision on robot to see obstacles and stop before crashing into them

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 Science & Applied Physics, Minor in Mathematics. — September 2017 – December 2021