Fawaz Mujtaba

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Education

B.S. in Computer Science and Math at the University of Nevada Las Vegas
Honors CS Student
3.7 GPA
Graduating Fall 2021

Skills

Languages: C, C++, C#, Java, JavaScript, HTML, CSS, Python, Flutter, RISC/MIPS Assembly, Kotlin

Software: Unity, Unreal Engine, Blender, MATLAB, MS Office, Android Studio

Additional Skills: TensorFlow and Keras, ROS/ROS2, LWJGL, OpenGL, GitHub, Jira, MySQL, AWS Cloud, NodeJS, IBM Qiskit, ExpressJS, Lamp Stack, VR, Windows, Linux, Mac, REST APIs, React, Neural Networks (RNN, CNN, LSTM), Deep Learning, Pytorch, React, Selenium, Pandas, Numpy

Experience

Qualcomm Software Engineering Internship (May 2021 - Present)

- Developed an internal website for programming file compilation, testing, comparisons, and overall data management with an Express NodeJS server and various REST APIs.
- Wrote scripts for parsing through real-time data packets along with generating Quicksight dashboards to display metrics.

Intellimind Full Stack Dev (May 2020 - April 2021)

- Developed CNNs for computer vision-based Captcha solvers to allow for web crawlers to traverse through websites blocked by them automatically.
- Created scripted web crawlers on EC2 Servers capable of logging in, traversing, and downloading files from numerous different websites, and reporting results to an RDS, and shown in websites to the end-user.
- Designed multiple React-based and HTML/JavaScript/CSS Serverless websites using self-made REST APIs, S3, and numerous other AWS cloud services linked with self-managed SQL databases for backend user and data management

NASA(JPL) Intern (Jun - Aug 2019)

- Developed TCP/UDP communication network for drones through ROS and ROS2
- Converted 2D lidar and height maps into 3D environment scenes for simulations

Personal Projects

Valorant Gun AI

- Built a data generator system to take video captured in front of a green screen, then broken up to frames, and compiled with many backdrop images, crops, and distortions to rapidly increase a data set for a PyTorch model
- Using a Raspberry Pi, Arduino, and old smartphones, built a gun capable of sending movement and aim directly to the game for controller input.

Music AI Generator

- Built a dataset with a collection of audio files, sliced them into 5-second segments, and converted each of them to a spectrograph.
- Used generated spectrogram images to train a GANs Neural Network to generate new spectrograms which could be converted back into Audio files to listen to.

Food Database Recipe Generator

- Utilized various datasets and APIs to create a phone app to scan barcodes, add items to a database, and offer recipes dependent on the food items scanned into the database.

Vision-Based Maze Search

- Trained AI to traverse maze in the first person and visually locate targets behind walls and corners.
- Utilized CNN fed with frames from in-game camera to determine movement.

Stock Market AI

- Created a data collector to download minutely measured stock market data including parsing through and adjusting missing data points for training.
- Utilizing recurrent and LSTM neural networks, created an AI to predict buy and sell signals

Backpropagation NN Data Reader from Scratch

- Programmed an application capable of taking an arbitrary number of inputs, layers, and outputs and generating a neural network model trained with backpropagation to predict the outputs anticipated by the user.
- Created in C# using no external libraries for any portion of the neural network.