TALHA YUNUS

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Portfolio
LinkedIn

Highly skilled and motivated CS student with expertise in various technologies, including Java, Firebase, Android Studio, ReactJS, Express, PostgreSQL, Nginx, HTML, CSS, JavaScript, NodeJS, Solidity, Python, Scikit-Learn, C++, C#, Winforms for desktop application development , SFML, Arduino, and more. Proven track record of developing innovative projects and delivering results. Strong problem-solving skills and ability to work independently or as part of a team.

EXPERIENCE

American Income Life - Life Insurance, US

OCT 2022 - DEC 2022

- Collected data of people in the United States through Web Scraping and provided affordable life insurances to them. (beautifulsoup, scrapy, selenium)

PROJECTS

Hyperspectral Image Super-Resolution via Deep Spatiospectral Attention Convolutional Neural Networks

- I developed a deep learning model for hyperspectral image super-resolution using a combination of spatiotemporal attention mechanisms and convolutional neural networks. The goal of the project was to enhance the spatial resolution of hyperspectral images while preserving their spectral information.
- The key components of the model include channel attention and spatial attention mechanisms, as well as ResNet blocks for feature extraction and fusion. The model takes as input a low-resolution hyperspectral image and a corresponding high-resolution RGB image.

Enhance Moon Image Resolution (inspired by Samsung's AI technology)

- I successfully created a comprehensive solution for enhancing moon images taken from mobile phones, inspired by Samsung's AI technology.

- By collecting and annotating moon images, leveraging the YOLO deep learning model, and implementing an autoencoder for resolution enhancement, I achieved visually improved high-resolution outputs.
- Additionally, I developed a user-friendly camera application using React Native to facilitate moon detection and super-resolution processes.

Social Media App
- Developed a social media app using Java, Firebase, and Android Studio
- Implemented features such as user login, registration, posting, liking, commenting, and profile updating
- Utilized Firebase as the backend database for seamless data management

Chattyfai
- Utilized ReactJS, Express, PostgreSQL, and Nginx to develop a chatbot using ChatGpt API and then deployed it.
- Integrated the chatbot on a website to provide instant responses to user queries

Fiverr Clone
- Developed a Fiverr clone website with HTML, CSS, JavaScript for the frontend and NodeJS, ExpressJS for the backend
- Utilized Firebase as the database for efficient data storage and retrieval

Graph Visualizer
- Made a Desktop Application using C#, Winforms (.NET) , and SFML
- Implemented Minimum Spanning Tree, BFS, DFS, Dijkstra, Prim, and Kruskal algorithms for graph analysis
- Visualized the edges between nodes for comprehensive graph analysis

Voting Website Web3
- Developed a voting website on Ethereum Blockchain using Solidity, React, and Web3JS
- Implemented smart contracts for candidate registration and vote counting
- Displayed real-time vote counts for each candidate for transparent and secure voting process

Multispectral Image Compression
- Implemented PCA on multispectral satellite images using Python, Scikit-Learn, and Geopandas

- Identified the most useful bands among the images for efficient compression
- Analyzed and compared the images to determine information loss

E-Hospital

- Developed a web-based E-Hospital project using HTML, CSS, PHP, and MySQL
- Implemented features such as patient registration, appointment scheduling, and medical records management

Web Scraper

- Extracted 8 million data entries from a dynamic website using Python and Selenium
- Implemented threading to significantly improve scraping speed from 30 days to 4-5 days

Line Following and Obstacle Detection Car

- Developed a line-following car with obstacle detection using Arduino, IR, and Ultrasonic sensors
- Implemented algorithms to detect objects in front of the car and navigate accordingly

Games (Minesweeper, Space Invader, Tic Tac Toe, Hangman)

- Developed various games using C++ and SFML, including Minesweeper, Space Invader, Tic Tac Toe, and Hangman
- Implemented game logic, user interface, and scoring system for engaging gameplay

CERTIFICATIONS

- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization (2023-04)
- Neural Networks and Deep Learning (2023-03)
- Supervised Machine Learning: Regression and Classification (2022-10)

SKILLS

- MERN Stack (MongoDB, ExpressJS, ReactJS, NodeJS)
- HTML, CSS, JS, BOOTSTRAP
- Computer Networking (Routing, packet tracer, wireshark)
- Android Studio, Java, Flutter, Firebase

- C, C++, C#, Linux, OS Programming
- Solidity, Web3, Dapps, Remix
- Cyber Security Tools (Metasploit, Nmap, Burp Suite, Aircrack-ng, Nikto, Tcpdump)
- Deep Learning, Python (Matplotlib, Seaborn, Numpy, Scikit-Learn, Pandas), Tableau
- Web Scraping (Beautiful Soup, Scrapy, Selenium)