RAKESH PASUPULETI

716-704-7640 | rakeshpa@buffalo.edu | linkedin | Github | Portfolio | Leetcode | Geeksforgeeks

EDUCATION

University at Buffalo, The State University of New York, **Aug 2022 – Jan 2024**
Master of Science in Computer Science GPA: 4.0/4.0

- **Relevant Coursework:** Analysis of Algorithms, Algorithms for modern Computation, Data Models and Query Languages, Operating System, Computer Architecture, Machine Learning, Computer Vision.

SKILLS & TOOLS

Languages: C, C++, C#, Java, Python, PHP, Solidity, Golang, SQL, R.
Database: MSSQL, MySQL, PostgreSQL, NoSQL, MongoDB.
Web Development: HTML, CSS, Bootstrap, JavaScript, TypeScript, React, Next.js, Node.js, REST API's.
Tools & Methodologies: Git, GitHub, OOP, Agile, CI/CD, SDLC.
Proficient Coder, Problem Solver And expert in Data structures and Algorithms.

WORK EXPERIENCE

Software Developer SUNY, Buffalo, NY **Aug 2022 – Jan 2024**

- Developed and maintained responsive web applications using React.js, JavaScript, and HTML/CSS, ensuring cross-browser compatibility and enhancing the user experience.
- Optimized front-end code to enhance performance and functionality, reducing load times by 30% and increasing user engagement by 20%.
- Collaborated with cross-functional teams to design, develop, and implement scalable backend solutions using SQL databases, improving data retrieval efficiency and system performance.
- Created and optimized SQL queries, stored procedures, and triggers to manage and manipulate large datasets, leading to a 20% increase in query performance.
- Engineered and deployed advanced machine learning and computer vision solutions, resulting in up to a 20% increase in accuracy for tasks such as camera calibration, facial recognition, and action detection, thereby significantly enhancing analytical precision and operational efficiency.

COMPUTER SCIENCE PROJECTS

NFT Marketplace for Code Snippets: Blockchain, Web3.js, Solidity, React, Bootstrap, JavaScript, **GitHub**

- Developed a decentralized application (DApp) enabling programmers to tokenize, buy, sell, and trade their code snippets in an NFT marketplace.
- Created a dynamic, responsive front end using React.js and Bootstrap, utilized Solidity for smart contracts, Ethereum as the blockchain platform, and Web3.js to interact with the blockchain.

Action Detection in Videos using Deep Learning: Python, TensorFlow, NumPy, GPU, **GitHub**

- Developed a real-time video action detection system for human action recognition using three custom Convolutional Neural Network (CNN) models.
- Achieved an 18%g improvement in action recognition accuracy compared to the baseline Alex Net model on the AVA Actions dataset, which densely annotates 80 distinct atomic visual actions in diverse video clips.

Facial Recognition and Clustering: Computer vision, Image processing, Python, OpenCV, **GitHub**

- Developed a custom facial clustering algorithm that achieved 97% accuracy across 500 test cases, despite variations in lighting and angles.
- Implemented a facial recognition pipeline to identify and extract faces, generating 128-dimensional feature vectors. Developed a custom K-means clustering algorithm to group faces based on features.

EXTRACURRICULAR ACTIVITIES/ ACHIVEMENTS

- State-level Baseball and Volleyball Player
- National Cadet Corps (NCC) Certification, demonstrating discipline and commitment.
- Published a Research Paper in the International Research Journal of Computer Science.