Shyam Makwana

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EDUCATION

Indiana University Bloomington, Indiana

Master of Science in Computer Science | GPA: 4/4 August 2022 – May 2024

Relevant Coursework: Applied Algorithms, Software Engineering, Elements of Artificial Intelligence, Machine Learning.

Dharmsinh Desai University Gujarat, India

Bachelor of Technology in Information Technology | GPA: 9.32/10 with Gold Medal July 2018 - May 2022

Relevant Coursework: Object-Oriented Prog, Design Patterns, Operating Systems, Distributed Computing, Computer Networks.

TECHNICAL SKILLS

Languages: Python, Java, C++, C, SQL, C#, R, JavaScript, HTML, CSS.
Web Technologies: ReactJS, NodeJS, Django, AngularJS, Bootstrap, Spring Boot, .Net, Hibernate.
Databases: MySQL, MongoDB, Neo4j, Oracle SQL.
Tools: Git, Visual Studio, Postman, Anaconda, Jupyter, Eclipse, Wireshark, Netbeans.
Other Technologies: Docker, Jenkins, Kubernetes, AWS, Shell script, GitHub Actions, Linux, Windows, Cloud.

EXPERIENCE

Indiana University Bloomington, Indiana

Teaching Assistant - System Prog with C & Unix (C291) and Data Structures (C343) August 2022 – Present

- Mentoring a class of 200+ students, aiding professors during classes, conducting labs, reviewing weekly assignment submissions, and providing individual feedback to students during office hours.

Indian Space Research Organisation (ISRO) Gujarat, India

Software Research and Development Intern | C#, .Net, C++, Socket Programming December 2021 – March 2022

- Developed an authentication protocol using Single Packet Authorization, used by 78 internal teams, that grants access to the user to access specific private services in the network.
- Improved the current network architecture to Software Defined Perimeter model using socket programming and C#, increasing its processing speed by 34% after adding 7 new features, utilizing a single network packet.
- Increased privacy by 28% through securely communicating authorization and authentication information across closed firewall ports using the zero trust security model.

PROJECTS

Waste Food Management System | *MongoDB, ExpressJS, ReactJS, NodeJS* January 2021 - March 2021

- Developed a production-ready end-to-end web application for donating excess food, improving its location efficiency to 25% by incorporating Google Map API.
- Saved more than 3300 pounds of food from events, hotels, and restaurants and delivered it to people in need, saving donors 45% time.

Content-based Book Recommendation System | *Python, NLTK, Gensim, SciPy* May 2021 - June 2021

- Devised a system to determine and visualize which books are categorically similar to each other and achieved an accuracy of 97.8%.
- Diagnosed text of all books in the dataset using NLTK and curated a distance matrix, and systemized all the information about book similarities using SciPy through a dendrogram.

All in One Compiler | *NodeJS, JavaScript, jQuery, Ajax, Flex, Yacc, C* December 2020 - March 2021

- Designed a web compiler for university students and faculties with 4+ features, including the first & follow, left factoring, left recursion, token generation, and accelerating the learning process.
- Conceptualized 2+ improvements to the compiler based on students' feedback leveraging Node, Flex, and C.

ACHIEVEMENTS

- Received Gold Medal for securing the first position in a department of more than 150 students.
- All India Rank (AIR) 09 in NCAT (National Creativity Aptitude Test) Exam Category 3.
- HackerRank Problem Solving (5 Star) and CodeChef (Highest Rating 1847 - 4 Star).
- Hash Code - Google's Coding Competition Global rank: 5350.