

Viraj Sabhaya

Arlington, TX

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EDUCATION

The University of Texas – Arlington

Bachelor of Science in Computer Science

May 2024

Arlington, Texas

EXPERIENCE

Research Assistant | IT Lab, University of Texas at Arlington

October 2022 – Current

- Developing analysis module for Multi-Layer Network (MLN) datasets (e.g., Airline hubs, LinkedIn connections, IMDb) to identify and classify distinct communities with 85% accuracy
- Uncovering underlying patterns within MLN data, resulting in a 75% improvement in pattern detection efficiency
- Enhanced the user experience by developing visually appealing representations, leading to a 60% increase in actions with the analyzed data and MLN structures

Software Engineering Intern | Securonix

June 2022 – August 2022

- Contributed to design, development, and maintenance of Securonix's NextGen SIEM 2.0 Technology, resolving real-time customer issues on Securonix cloud
- Conducted automated test using cypress on the SNYPR software, ensuring 100% successful execution of test cases.
- Utilized big data technologies such as Kafka, and Spark on the DataSource project, resulting in a 30% improvement in data processing and efficiency by creating an automation tool for the QA team

Research Assistant | IT Lab, University of Texas at Arlington

April 2022 – June 2022

- Created a Visualization module, yielding 80% better insights via interactive elements like hovers, and ledgers.
- Improved data understanding of the overall results for MLN analyzed results using community network visualizations.

Student Lab Assistant | Office of Information Technology, UT Arlington

January 2021 – April 2022

- Successfully maintained computers, kiosks, printers in more than 4 computer labs, ensuring seamless operations in class.
- Provided software aid, supporting students and professors, leading to efficient academic environments.

SKILLS

Technical Skills: Python, C/C++, React Native, Java, HTML, JavaScript, CSS, C#, Swift, Rust, Figma, GCC/G++, Lucid chart, Firebase, Git, Jira, XCode, Wireshark, Docker, Flask, SQL Server Management Studio, AzureDevOps

Soft Skills: Teamwork, Communication, Problem-Solving, Critical Thinking

PROJECTS

ERS, BECHT Web-Dashboard | C#, .NET Core, Telerik, Microsoft SQL Server

- Developing a web application, to mitigate risks minimizing health, safety, and environmental accidents. The application implements an Equipment Reliability Strategy (ERS) to effectively identify failure mechanisms
- Facilitated efficient client and site management by developing an intuitive user interface for the addition and tracking of industrial equipment and their maintenance history.

Load and Ask: GPT | Python, OpenAI, LLM, embeddings, FAISS, Langchain

- Created a Streamlit web app utilizing OpenAI's API to fetch answers from uploaded PDF documents
- Optimized data storage and reduced costs by implementing chunking and vector conversion techniques, resulting in a 50% reduction in storage requirements

Routing Protocol Simulation | Python, Routers

- Developed and Implemented a Distance-Vector algorithm simulation to optimize communication routes between network routers/nodes
- Achieved 40% improvements in communication efficiency by dynamically updating routing tables based on network conditions

Arlington Sprouts Database Management | MySQL, Python, Apache webserver, XAMPP

- Created a comprehensive database for Arlington Sprouts Store, a premium sprouts seller
- Supported data-driven decision making by executing SQL queries to extract relevant information from the database, resulting in a 60% reduction in data retrieval time.
- Improved operational efficiency by developing an intuitive web interface, enabling seamless interaction with the database

Operating System | C/C++, gcc, parallelism, Arena-allocator, LinkedList, Shell, Fat32

- Developed a feature-rich mshShell for basic shell functionality, Fractal for faster image generation using thread-based parallelism, memory allocator with multiple algorithms, and a reliable file system

AWARDS

Nokia Outstanding Professional Computer Science Student | College of Engineering, UT Arlington

April 2023