

Viraj Sabhaya

Arlington, TX, United States

682-704-1967 | sabhayaviraj23@gmail.com | [linkedin.com/in/vsabhaya23](https://www.linkedin.com/in/vsabhaya23) | github.com/virajsabhaya23

EDUCATION

The University of Texas - Arlington

Bachelor of Science in Computer Science

Jan. 2020 – Current

Arlington, Texas

AWARDS

Nokia Outstanding Professional CS Student @ *College of Engineering, UT Arlington*

April 2023

TECHNICAL SKILLS

Languages: Python, C/C++, Java, HTML, JS, MySQL, CSS, C#, Swift, Rust, Node.js

Developer Tools: XCode, Figma, Adobe XD, gcc/g++, GitHub, Linux, AzureDevOps, Lucidchart, Firebase, HuggingFace, SQL Server Mgmt. Studio, Jira

Technologies: Git, APIs, NumPy, Pandas, Matplotlib, Scipy, Sklearn, nltk, NetworkX, SwiftUI, PyQt5

EXPERIENCE

Research Assistant @ *IT Lab, UT Arlington*

October 2022 – Present @ *Arlington, Texas*

- Developing Analysis module to perform analysis on Multi-Layer network data sets such as Airline, LinkedIn connections, IMDb, and Co-Actor networks to detect Communities and patterns
- Developed Visualization module to effectively visualize results analyzed data & multi-layers generated from MLNs

Software Engineering Intern @ *Securonix*

June 2022 – August 2022 @ *Dallas, Texas*

- Conducted automated tests using Cypress on the SNYPR Software, ensuring successful execution
- Contributed to the design, development, and maintenance of Securonix's NextGen SIEM 2.0 Technology, resolving real-time customer issues on Securonix cloud, and utilizing big data technologies such as Kafka, and Spark on the DataSource project

Research Assistant @ *IT Lab, UT Arlington*

April 2022 – June 2022 @ *Arlington, Texas*

Student Lab Assistant @ *Office of Information Technology, UTA*

Jan. 2021 – April 2022 @ *Arlington, Texas*

PROJECTS

Pdf-GPT: Load and Ask | *Python, OpenAI, LLM, embeddings, FAISS*

On-going

- Created a Streamlit web app utilizing OpenAI's API to fetch answers from uploaded PDFs
- Implemented chunking and vector conversion to optimize data storage and reduce costs

Analysis & Visualization - MultiLayer Network | *Python, Plotly, NetworkX, Bokeh, Louvain*

On-going

- Analyzing data and detecting patterns and communities in multi-layer network datasets like Airlines, IMDb
- Developed algorithms to visualize and analyze layers of data using Python, Plotly, NetworkX, Bokeh, map Equation, Louvain; Enabling users to explore interactions, identify patterns and understand network community structures

ERS, BECHT Web-Dashboard | *C#, .NET Core, Entity Framework & MSSQL, Angular, Azure Cloud*

On-going

- Developing a Web application catered to organizations that own/operate process facilities in various industries, to mitigate risks minimizing health, safety, and environmental accidents by effectively identifying failure mechanisms through the implementation of Equipment Reliability Strategy (ERS)

Routing Protocol Simulation | *Python, Routers*

April 2023

- Developed and Implemented a Distance-Vector algorithm simulation for optimizing communication routes between network routers/nodes

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

March 2023

- Created a robust database for Arlington Sprouts Store, a premium sprouts seller, ensuring efficient data management
- Executed SQL queries to extract relevant information from the database, supporting data-driven decision making
- Developed an intuitive web interface enabling seamless interaction with the database for efficient operations

Operating System | *C/C++, gcc, parallelism, Arena-allocator, LinkedList, Shell, fat32,*

Dec. 2022

- Developed mshShell for basic shell functionality, Fractal with thread-based parallelism for faster image generation, memory allocator with various algorithms, and a file system

Java Web Applications | *Java, JavaFX, GUI, HTML, CSS, JS*

Nov. 2021 – May 2022

- Developed Web Poker using Java with a focus on OOPs concepts, HTTP server, and websockets
- Developed Stock Management System GUI application using JavaFX and Alpha Vantage API for managing user's stock portfolio