

Viraj Sabhaya

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EDUCATION

University of Texas - Arlington
Bachelor of Science in Computer Science

Jan. 2020 – Current
Arlington, Texas

AWARDS

Nokia Outstanding Professional CS Student
College of Engineering

April 2023
UT Arlington

TECHNICAL SKILLS

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

Developer Tools: VS Code, Android Studio, Figma, Adobe XD, Xcode, gcc/g++, GitHub, Raspberry Pi, Linux, AzureDevOps, Lucidchart, SQL Server Mgmt Studio, Jira

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

PROJECTS

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

April 2023

- Developed a streamlit web-app that uses OpenAI's API to retrieve answers to questions asked from the PDF file uploaded. Divides pdf-file into chunks, converted to vectors to store large info in smaller data size to save cost.

Analysis and Visualization - MultiLayer Network / *Python, Plotly, NetworkX, Bokeh, Louvain*

On-going

- Analyzing data to recognize communities, patterns, and behavior of nodes from a multi-layer network data set like Airlines, IMBd
- Developed algorithms to visualize Layers generated and analyzed Data
- Allows users to explore the node interactions, recognize patterns and the community structure of a network

ERS, project from BECHT / *C#, .NET Core, Entity Framework & MSSQL, Angular, Azure Cloud* **Jan. 23 - Present**

- Developing a Web application for organizations that own/operate process facilities across many industries including traditional and renewable energy, to Mitigate risks to minimize health, safety, and environmental accidents by identifying failure mechanisms
- ERS - Equipment Reliability Strategy can also maximize asset ROI

Auto YouTube Transcript Analyzer / *Python, OpenAI, LLM*

April 2023

- Developed a web application using Streamlit that generates transcripts from provided youtube video link and uses OpenAI turbo model 3.5 to answer users' questions about that video

Routing Protocol Simulation / *Python, Routers*

April 2023

- Developed a simulation using Distance-Vector algorithm to find the optimal route for communication between two routers/nodes in a network topology

Arlington Sprouts Database Implementation / *MySQL, Python, Apache web-server, XAMPP*

March 2023

- Designed a database for the Arlington Sprouts Store, a premium quality sprouts seller
- Performed SQL queries to retrieve data from the database as needed
- Developed a web interface that performs the given operations via the interface on the database

Personal Web Portfolio / *HTML, CSS, JavaScript*

March 2023

- <https://virajsabhaya23.github.io/>

DataSource / *JS, python, cypress, Selenium at SECURONIX*

Aug. 2022

- Conducted successful automation tests on Threat detection software (SNYPR).
- Created an automation tool to convert CSV to required JSON libraries

Web Poker / *Java, HTML, CSS, JavaScript*

Feb. 2022 - May 2022

- A web application using OOPs concepts, HTTP server, and WebSockets

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

March 2022

- Developed mshShell that can perform basic functionality of a bash Shell
- Fractal, computes and generates the image using Mandelbrot set via the help of threads to perform parallelism and makes the process faster
- Implemented a memory allocator that supports First Fit, Next Fit, Worst Fit and Best Fit algorithms
- Developed a fileSystem where Users can create filesystem image, list, add, remove, and save the files

- A GUI application made using JavaFX and Alpha Vantage API for managing a stock portfolio.

EXPERIENCE

Student Research Assistant**October 2022 – Present***IT Lab, UT Arlington**Arlington, Texas*

- Developing Analysis module to perform analysis on Multi-Layer network data sets like airline's network, to detect Communities and patterns
- Developing Visualization module to visualize results of big data and of analyzed data

Software Engineering Intern**June 2022 – August 2022***Securonix**Dallas, Texas*

- Designed, developed, and maintained Securonix's NextGen SIEM 2.0 Technology.
- Worked on Securonix's cloud to debug real-time customer issues and solve them.
- Worked on big data technologies KAFKA, SPARK, and MYSQL on the DataSource Project.

Student Research Assistant**April 2022 – June 2022***IT Lab, UT Arlington**Arlington, Texas***Student Lab Assistant****Jan. 2021 – April 2022***Office of Information Technology, UTA**Arlington, Texas*

- Assisted in new lab installations or reconfiguration, as well as receiving and redistributing supplies.
- Guided Students and Professors with printing, logins, and various software related issues.

EXTRACURRICULAM

Engineering Student Council (ESC.UTA)**Feb. 2022 - Aug. 2022***Events and Marketing Officer**UT Arlington*