

# 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

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

## PROJECTS

**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 2023 - On-going**

- 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 the files, add files, remove files, and save the filesystem

**Stock Management System** | *Java, GUI, JavaFX, APIs*

**Nov.2021 - Dec. 2021**

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

## EXPERIENCE

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### Student Research Assistant

*IT Lab, UT Arlington*

**October 2022 – Present**

*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

*Securonix*

**June 2022 – August 2022**

*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

*IT Lab, UT Arlington*

**April 2022 – June 2022**

*Arlington, Texas*

### Student Lab Assistant

*Office of Information Technology, UTA*

**Jan. 2021 – April 2022**

*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

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### Engineering Student Council (ESC.UTA)

*Events and Marketing Officer*

**Feb. 2022 - Aug. 2022**

*UT Arlington*