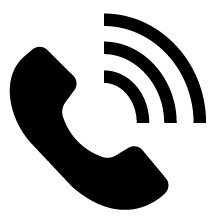
Syed Kaab Surkhi

Bachelor of Computer Engineering

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# EDUCATION

**Bachelor of Engineering in Computer Engineering,** Toronto Metropolitan University *2023 - 2027*

**Relevant Courses:** COE 318 - Software Systems | COE 428 - Engineering Algorithms and Data Structures | COE 528 - Object Oriented Eng Analysis and Design | ELE 404 - Electronic Circuits I | COE 328 - Digital Systems

# TECHNICAL SKILLS

**Programming Skills:** Python, C++, C, C#, MATLAB, Java, MySQL

**Frameworks:** Flask, Node.js, React.js, Tailwind CSS, OpenCV, Websocket, Golang, CLI Tools, PyGTK, Ros2, TCP Connections, Streamlit

**Tools:** AutoCAD, 3D Printing, Electric Circuits, Git, Visual Studio, Firebase, Arduino, NI Multisim, Quartus, NetBeans, Unity, JavaFX

# WORK EXPERIENCE

**Research Practicum Assistant,** Toronto Metropolitan University, May 2024 - Ongoing

* **Evaluated** 3 international research papers and **benchmarked** curriculum outlines from over thirteen Canadian universities;

**pinpointed** key textbooks, culminating in comprehensive recommendations for a redesigned Linear Algebra course structure.

* **Collaborated** with a professor and a team of 3 assistants to **design** an impactful teaching plan for a first-year Linear Algebra course.
* **Partnering** with organizations to **develop** an open-source textbook in PreText, **transitioning** concepts from pre-calculus to advanced university-level mathematics.

**Network Programming Controls and Web Developer,** [Metropolitan Hyperloop](https://methyperloop.netlify.app/)**,** Sep 2024 – Ongoing

* **Collaborated** with various operation-teams such as marketing to develop a promotional website, **utilizing** React.js and Tailwind CSS and **designing** a multi-tier sponsorship benefit system.
* **Built** a **GUI** to display significant readout data when running the pod and connected a central **RaspberryPi** to the backend of the GUI via **TCP Connection** for successful transmission of the data.

**Software Developer,** Toronto MetRobotics Oct 2024 – Ongoing

* **Implemented** a control program for a Robotics Rover, **enabling** simultaneous component management through a game controller, and **transmitting** data with the **Pysocket and Websocket libraries**.
* **Developed** a **GUI** for a multi-camera system on the rover with **PyGST** with the use of **TCP Connections** and **CLI tools** for testing.
* **Incorporated** dual production **pipelines** with different methods to efficiently target needs such as faster or smooth streaming.

# TECHNICAL PROJECTS

[**Inclusee,** Hackthe6ix](https://devpost.com/software/inclusee) | *ReactJS, Adobe-Add-On-SDK, css3, JavaScript* July 2024

* **Programmed** an Adobe Express Add-On within 36 hours, **enhancing** design accessibility for users with low vision, dyslexia, and other impairments; currently **undergoing** review for the official Adobe Add-On marketplace.
* Incorporating real-time feedback by analyzing colors, fonts, and layouts used with **React.js, Javascript, and CSS.**

[**Vireel,** Google Gemini API Developer Competition | Startup](https://github.com/SurkhiSyed/Vireel) | *Flask, Python, ReactJS, TailwindCSS, GeminiAPI, JavaScript* August 2024

* **Engineered** a news aggregation app, integrating four APIs including **Gemini** and **News API** to **curate** personalized, concise news for users in the Google Gemini API Developer Competition.
* **Leveraged** the **React.js** framework and **Tailwind CSS** for the frontend, with **Python Flask** for the backend, to build a

comprehensive full-stack social media app, featuring messaging, liked articles, and genre customization.

[**BetEd,** Snowflake Rag ‘n’ Roll Competition](https://devpost.com/software/project-hk1nfi?ref_content=my-projects-tab&ref_feature=my_projects) | *Streamlit, Python, WebScraping, JavaScript, RAG, TailwindCSS, Firebase, Snowflake* January 2025

* **Developed** a networking platform for inexperienced tech seekers to **collaborate** on challenging competitions while being tutored by a

**trained learning model** and receiving feedback from professionals at the Snowflake RAG competition.

* **Implemented Retrieval Augmented Generation (RAG)** for training an AI model with the use of **Snowflake** database for storing documentation, **Mistral LLM** for generation, **Cortex Search** for retrieval, and **Streamlit** for the frontend display.

[**BookCartFX**](https://github.com/SurkhiSyed/BookCartFX)[**,**](https://devpost.com/software/project-hk1nfi?ref_content=my-projects-tab&ref_feature=my_projects)| *Java, JavaFX, SceneBuilder, FXML, UML Modeling, Design Patterns, Java GUI* March 2025

* **Developed** a Bookstore application in **JavaFX**, implementing secure user authentication, encrypted data storage, and real-time book management functionalities.
* Collaborated in a team to design and implement system architecture using UML modeling and design patterns, ensuring scalability.