**Syed Kaab Surkhi**

Bachelor of Computer Engineering

(647)515-7386 |[Linkedin](https://www.linkedin.com/in/syed-kaab-surkhi/) |[Portfolio](https://syedkaabsurkhi.com/) |[Github](https://github.com/SurkhiSyed) | [ssurkhi56@gmail.com](mailto:ssurkhi56@gmail.com)

**EDUCATIONBachelor of Engineering (B.Eng), 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:** CAD, 3D Printing, Electric Circuits, Git, Firebase, Arduino, NI Multisim, Quartus, NetBeans, Unity, JavaFX, Supabase, Vector DB

**WORK EXPERIENCE**

**Full Stack Developer, Momentum AI** — May 2025 – Ongoing

• Developed a full-stack AI study application featuring flashcards, study planners, exam generators, and a RAG-trained assistant, utilizing Flask for the backend and React.js for the frontend.

• Implemented all application functionalities, including database integration and user authentication, ensuring seamless user experience and data management.

• Collaborated effectively with a team of developers within an agile startup environment to deliver a functional and scalable product.

**Term Project Leader, Toronto Metropolitan University** — Sep 2023 – Nov 2023

• Led a 10-member team in redesigning a 3D printing process, achieving a 15% increase in efficiency and a 10% reduction in material waste.

• Researched and implemented safer 3D printing material alternatives, resulting in a 5% decrease in operational risk.

• Programmed three iterations of the improved printing process in Java, iteratively refining performance and addressing identified issues.

**Network Programming Controls and Web Developer, Metropolitan Hyperloop** — Sep 2024 – Ongoing

• Developed a promotional website using React.js and Tailwind CSS, resulting in a 20% increase in website traffic and sponsorship inquiries.

• Designed and implemented a multi-tier sponsorship benefit system, improving sponsor engagement and satisfaction.

• Built a GUI to display real-time data from a hyperloop pod, successfully transmitting data via TCP connection to a central Raspberry Pi server.

**TECHNICAL PROJECTS**

**BetEd** *| Python, Snowflake, Mistral LLM, Cortex Search, Retrieval-Augmented-Generation, Streamlit, AI Model Training, Database Management, Full Stack Development, Web Development*

• Developed a full-stack networking platform using Streamlit, Python, and Firebase, connecting inexperienced tech seekers with collaborative challenges and AI-powered tutoring.

• Implemented Retrieval Augmented Generation (RAG) leveraging Snowflake database for documentation storage, Mistral LLM for text generation, and Cortex Search for efficient information retrieval.

• Designed and implemented the AI model training pipeline, optimizing retrieval and generation processes to enhance the user experience and learning outcomes.

**Vireel - Startup** *| React.js, Tailwind CSS, Flask, Python, API Integration, Gemini API, News API, Full Stack Development, Backend Development, Frontend Development*

• Engineered a full-stack news aggregation application integrating four APIs (including Gemini and News API) to deliver personalized, concise news summaries to users.

• Developed the frontend using React.js and Tailwind CSS, creating a user-friendly interface for news consumption, saving, sharing, and commenting.

• Built the backend using Python Flask, managing API interactions, user authentication, and data persistence to support a scalable and robust platform.

**ExploreWorld Unity** *| Unity, C#, Game Development, Physics Engine, 3D Modeling, Game Design, Simulation, Software Development*

• Developed a solo exploration game in Unity using C#, focusing on realistic physics simulations incorporating gravity, acceleration, mass, and forces on various in-game objects.

• Implemented control mechanisms for over two vehicles, each exhibiting unique physics behaviors based on mass, friction, and other physical properties.

• Integrated advanced components like terrain and six different skyboxes, creating an immersive and challenging gameplay experience within the Unity environment.