

# Khalid Karim – Agile Software Developer

Vancouver, BC | 236-339-8382 | Email | LinkedIn | GitHub | Portfolio Website

## EDUCATION

**Simon Fraser University**, Burnaby, BC  
*Bachelor of Science in Computer Science - 3.5 GPA*

**Expected Graduation Date: Sep 2026**

## EXPERIENCE

### Full Stack Developer

*Google Developer Student Club*

**May 2025 - Present**

*Burnaby, BC*

- Co-led development of a **React**-based campus dashboard for **200+** students, integrating Firebase for real-time data.
- Delivered three workshops on **Next.js** and **Tailwind CSS**, boosting attendance by **35%** and onboarding **50+** members.
- Reviewed code & mentored **10+** juniors on **JavaScript** best practices, improving code quality & reducing bugs by **20%**.

### SWE Intern

*CJSF 90.1FM Radio*

**Oct 2024 - Jan 2025**

*Burnaby, BC*

- Developed homepage and **donations page** in Next.js, improving user navigation and boosting donations by **15%**.
- Integrated **Strapi CMS + REST APIs** to manage user accounts and program scheduling, saving 10+ admin hours weekly.
- Created responsive UI/UX in **Figma** and used **Git** for team collaboration and faster deployment cycles.

### Software Developer

*SFU Surge*



**Jan. 2025 - Apr. 2025**

*Burnaby, BC*

- Launched a resume & cover letter builder using **OpenAI API**, applying **prompt engineering** for job-specific targeting.
- Leveraged **JSearch API** to match user resumes with relevant job listings, accessing over **120,000+** opportunities.
- Applied **Jakob Nielsen's 10 UI heuristics** using React, TypeScript, Tailwind CSS, and Figma for clean design.
- Gained product development experience, managing system architecture, **API integration**, and fast **MVP** iterations.

## PROJECTS

**Graphical Operating System** | *Low-level OS built from scratch* |



**C, x86 Assembly, NASM, GCC, QEMU, Make, Linux**

- Built a **32-bit operating system** with window elements and real-time keyboard/mouse input via hardware interrupts.
- Wrote a 16-bit bootloader in **Assembly** to enter protected mode and load a **C-based kernel** with memory management.
- Implemented double-buffered graphics, cooperative **multitasking** (bouncing ball demo), and tested using QEMU.

**AI Podcast Clipper** | *SaaS for turning podcasts into viral clips* |



**Next.js, FastAPI, Python, Inngest, Stripe, AWS S3**

- Built a **SaaS** that transcribes podcasts, detects viral clips, and renders cropped videos using WhisperX and LR-ASD.
- Integrated **FastAPI, Inngest, Modal**, and **AWS S3** for queue-based GPU processing and cloud-based clip storage.
- Leveraged **PyTorch, TensorFlow, FFmpeg** for face detection and speech feature extraction across the full **ML pipeline**.
- Implemented a credit system with **Stripe**, auth with **Auth.js**, and a dashboard using Next.js 15 and ShadCN.

**NASA Mission Control** | *Launch scheduler with CI/CD pipeline* |



**MERN, Docker, CI/CD, JWT, SpaceX API, AWS EC2**

- Developed a launch scheduler app that fetches from the **SpaceX API** and serves it to a **Node** backend for launch tracking.
- Used **Docker** to containerize the backend; deployed on an **AWS EC2 instance** with port config and restart rules.
- Implemented full CI/CD using **GitHub Actions** to test across Node & MongoDB versions and run builds on pushes.

**UniStream** | *MERN University event livestreaming web app* |



**React, Node.js, MongoDB, Express, TailwindCSS**

- Created a **full stack livestreaming platform** to let students join campus events instantly and give admins full control.
- Enhanced event discovery with **live statuses**, smart labels, and **debounced search** across role-based views.
- Secured token-based authentication with **JWT**, ensuring secure user sessions and preventing unauthorized API access.

## TECHNICAL SKILLS

**Languages/Databases:** JavaScript, TypeScript, C/C++, Python, Flask, FastAPI, HTML5, CSS3, SQL, MongoDB, GraphQL

**Frameworks:** React, TensorFlow, PyTorch, Next.js, Node.js, Express, Django, Tailwind, ASP.NET MVC, OAuth

**Developer Tools:** Jest, Jenkins, Git, Github Actions, CI/CD, AWS, Docker, Figma, Inngest, Deno

**Systems and Emulation:** C, x86 Assembly, NASM, QEMU, Make, GCC, GRUB, Protected Mode, Hardware Interrupts

**Networking & IoT:** MQTT, TCP/IP, IoT, Raspberry Pi, WebSockets, MultiMedia Systems