

Arfaz Hossain

Victoria, British Columbia

www.github.com/arfazhxss
www.linkedin.com/in/arfazhussain
arfazhxss.ca/resume.pdf

June 21, 2024

University of Victoria

Division: Department of Physics and Astronomy

Location: Victoria, British Columbia

Dear Hiring Manager:

I am excited to apply for the **HEP Software Developer** Co-op Placement at **University of Victoria**. I am a software engineering student at the University of Victoria in British Columbia. I am eager to learn and grow in the field of computer and software engineering, and I believe that this role will help me gain valuable work experience related to my interests and help me acquire a practical understanding in a real-world setting.

I have a fascination for developing web and mobile applications, and I am continually learning new skills through personal projects outside school. I have been involved in more than 13 software development projects, including developing an iOS weather application in Swift Programming Language, creating a 3D graphical simulation of a Rubik's Cube in C++ and OpenGL, and developing web development projects in React, JavaScript, and TypeScript. I have been an active member of the Engineering and Computer Science Students Society and UVic Students Society, where I have worked as a mentor during my second year and volunteered in multiple events while engaging in software development projects throughout my time.

Throughout my academic endeavours, I have had the chance to learn the basic concepts of object-oriented programming, software architecture and development, testing and evolution, data structures and algorithms. I have actively contributed to UVic Rocketry and VikeLabs as a full-stack web developer, where I have spent much of my time collaborating and developing solutions to issues while reviewing code mostly written in TypeScript and Python. My experience includes developing schemas in both relational and non-relational databases such as MongoDB and PostgreSQL, utilizing database tools and services such as Prisma, PlanetScale, and Mongoose. Throughout my projects, I have used automation and testing frameworks such as Selenium, Puppeteer, Cypress, JUnit, Maven, and Gradle. While working in teams at UVic Rocketry, I used ticketing tools such as Jira and Kanban. I plan to specialize in visual computing and data mining, involved in projects that are closely tied to my interests. My strength lies in my ability to work independently, collaborate, adapt to new environments, and gain familiarity with new tools necessary to excel in this role.

I am currently available for a 4-month work term and would be open to the possibility of participating in more than one consecutive terms. Thank you for considering my application. I look forward to the opportunity to further discuss my skills and experience with University of Victoria.

Most Sincerely,



Arfaz Hossain (He/Him)

Software Engineering Student,
University of Victoria

Arfaz Hossain

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EDUCATION

Bachelor of Software Engineering (BEng)

University of Victoria

Sept. 2021 – Present

Victoria, BC

TECHNICAL SKILLS

Languages: Java, Python, TypeScript, JavaScript, Objective-C (Swift), C++, HTML/CSS, R

Frameworks and Libraries: Node, Next.js, React, Express, Material, Shadcn, Tailwind CSS

Databases: MySQL, PostgreSQL, SQLite, MongoDB, Redis, DynamoDB, CloudSQL

Developer Tools: Visual Studio, IntelliJ, JUnit, Eclipse, Maven, Gradle, Git, Docker

SELECTED COLLABORATIVE PROJECTS

Course Planner

[www.github.com/arfazhxss/course-planner](https://github.com/arfazhxss/course-planner)

Feb 2024 – Present

Victoria, BC

- Developing a course planning tool for students using Next.js and PostgreSQL, facilitating students to plan their course selection and checking degree progress by dragging and dropping courses into the database
- Utilizing Puppeteer and Selenium for automated web scraping, extracting course data from degree-specific websites, and using Node.js in the backend with PostgreSQL for database management

Coop-me

[www.github.com/VikeLabs/coopme](https://github.com/VikeLabs/coopme)

Dec 2023 – Present

Victoria, BC

- Developing an improved co-op job search platform for University of Victoria students by scraping data from Learning In Motion (LIM) using Puppeteer and Cypress, and populating the database with job listing data
- Integrating Prisma Object-Relational Mapping tool with PostgreSQL for backend database management, NextAuth.js for authentication, Next.js for server-side rendering, Tailwind CSS and Shadcn for UI/UX design

Ground Support System

[www.github.com/UVicRocketry/Ground-Support](https://github.com/UVicRocketry/Ground-Support)

Jul 2023 – Jan 2024

Victoria, BC

- Collaborated with a team of 13 developers in developing a full-stack telemetry visualization and post-flight analytical software for engineering students analyzing rocket performance in real-time
- Developed front-end components in React using TypeScript, contributed to the project's final Figma designs, and implemented data visualizations through Material-UI tables and charts

SELECTED PERSONAL PROJECTS

Rubik's Cube (3D Simulation)

[www.github.com/arfazhxss/OpenGL-projects](https://github.com/arfazhxss/OpenGL-projects)

Feb 2023 – June 2023

Victoria, BC

- Developed a 3D simulation utilizing OpenGL libraries GLUT, GLFW, and GLM, incorporating graphics rendering techniques through GLSL (Shader Language) for visualizations, mathematical operations
- Implemented intuitive keyboard and mouse controls, including precise cube rotations with keys such as L, J, I, K, and dynamic zoom functionalities with keyboard shortcuts

RELEVANT EXPERIENCES

Software Team Lead

VikeLabs

Feb 2024 – Present

Victoria, BC

- Collaborating with 5+ software team leads and executives to arrange workshops for 100+ computer science and software engineering students, attending weekly meetings and bi-weekly hackathons, and leading two full-stack projects

Graphics Coordinator

Engineering and Computer Science Student's Society

Jan 2023 – Present

Victoria, BC

- Designing posters and social media content, volunteering at events, managing office hours to ensure the availability of the student lounge, and maintaining the official website and the exam bank for all engineering and computer science students

Grocery Clerk

Save On Foods

Apr 2022 – Sept 2022

Victoria, BC

- Oversaw store operations with a team of 10 to 12 members, addressed customer inquiries, maintained inventory through detailed stock records and rotations, helped reduce stock shortages by 7%, and stocked products into store shelves

HONORS AND AWARDS

- Recipient of University of Victoria's International Entrance Scholarship

2021 – 2022