

Saurav Banna

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EDUCATION

University of British Columbia

BSc, Computer Science - GPA: 93.1%

Vancouver, BC

Sept 2021 - May 2025

- Teaching Assistant for Data Structures and Algorithms course
- Faculty of Science International Student Scholarship
- Trek Excellence Scholarship 2021 (Top 5% of Faculty)

TECHNICAL SKILLS

Programming Languages : JavaScript / TypeScript, C#, Python, Java, C++, React, HTML / CSS

Tools / Frameworks : Azure, .NET, MongoDB, Jest, Docker, Git, Express, Flask, Webpack, Figma

WORK EXPERIENCE

CoPilot AI

Software Engineer

Jan 2023 - Present

Vancouver, BC

- Planned, implemented, and deployed multiple **TypeScript** Azure Function App **microservices** to efficiently process millions of units of data by accessing **MongoDB** endpoints, and ensured comprehensive testing with **Jest** in a fast-paced Agile startup team environment
- Restructured crucial parts of the active codebase with **C#**, **.NET**, and **MSTest** to streamline Azure deployment for multiple clients, improving maintainability and saving \$8,600/month in server costs
- Designed software using **C#** patterns such as Dependency Injection, Factory and Singleton classes, Reflection, and Tasks, and rigorously planned out and tested changes to the actively deployed product
- Designed and implemented reusable **React** components and hooks to display custom feedback surveys to customers, with **Redux** for state and **LESS** for styling
- Optimized CI/CD **YAML** pipelines for Azure DevOps and reduced deployment time by 80%

UBC Thunderbots

Software Developer

Sept 2022 - Present

Vancouver, BC

- Collaborated in a team of 15 on autonomous soccer-playing robots competing in RoboCup
- Improved cost functions and wrote simulated tests using **C++** in a **Linux** environment to ensure more accurate passing gameplay behavior
- Enhanced the control system of the robots to support multiple simultaneous input sources with **C++**, **Python**, and **Protobufs**, and added new UI features with **PyQt** to increase ease-of-use
- Led a team of 3 in planning, developing, and implementing a robust **PyTest** testing framework for non-deterministic AI behavior, which reduced test flakiness and ensured reliable robot performance

Electrical and Computer Engineering Department, UBC

Undergraduate Research Assistant

May 2022 - Sept 2022

Vancouver, BC

- Conducted research in a team of 3 to investigate novel ways to automatically decompose monolithic applications into microservices under an IBM initiative
- Developed a full-stack web application with another researcher that enabled the extraction and visualization of microservices using **React**, **TypeScript**, **Flask**, and **MongoDB**

PROJECTS

Essentially Sept 2022 - Feb 2023

github.com/ubclaunchpad/Essentially

- Collaborated in a team of 6 to develop a Chrome browser extension using **TypeScript**, **Express**, and **React** to summarize news articles with natural language processing models
- Designed and developed the pop-up UI, light/dark theme, and highlighted text selection

Music Maker Jan 2022 - Apr 2022

musicmaker-9c83c.web.app

- Developed a full-stack web application for music creation and sharing with an interactive keyboard
- Implemented reusable **React** components in **TypeScript** with **HTML/CSS** for the front-end, **Redux** for state management, and **JavaScript** with Firebase for database connections

INTERESTS

Volunteering : UBC Orientation Leader, UBC Imagine Day Leader, Sree Narayana Mission Singapore

Languages : Telugu, Hindi, French

Interests: Graphics Design, Animation, Digital Art, Cooking, Badminton