

# Saurav Banna

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## EDUCATION

**University of British Columbia**  
BSc, Computer Science - GPA: 94.3%

Vancouver, BC  
Sept 2021 - May 2025

## TECHNICAL SKILLS

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

**Tools / Frameworks** : React, Redux, JUnit, Jest, Git, Github, Web Audio API, Figma, Command Line, Node.js

## WORK EXPERIENCE

**Undergraduate Research Assistant**

*Electrical and Computer Engineering Department, UBC*

Vancouver, BC  
May 2022 - Sept 2022

- Conducted research in a team of 3 to find novel ways to automatically decompose monolithic applications into microservices
- Developed new features for a full stack web application that could extract and visualize microservices using React and Python Flask along with another researcher
- Analysed dependency data from 10 sample apps to find microservice candidates and compare to developer decompositions
- Gained extensive experience with full stack web development, Python scripting, Command Line, Virtual Machines, and Ubuntu

## PROJECTS

**Music Maker** Jan 2022 - Apr 2022

musicmaker-9c83c.web.app

- Developed a full stack web application using React for users to create and share music on a social media platform
- Allows users to play 5 different instruments on an interactive keyboard, download / upload their notes as JSON, upload songs, and listen to and follow other users
- Worked with React for reusable functional components and custom hooks, Redux for dispatching state updates, HTML/CSS for keyframe animations and selector styling, Web Audio API for a global AudioContext, and JavaScript with Firebase for user authentication and asynchronous data retrieval
- Used an optimized project structure and wrote well-formatted, readable code with best practice React design patterns to increase future adaptability

**PostIt** Jan 2022 - Apr 2022

github.com/sauravbanna/PostIt

- Designed and developed a Java Swing desktop forum application as part of coursework
- Carried out a Test Driven Development process with an extensive test suite using JUnit5 while learning Java Swing independently
- Implemented core OOP principles by creating an inheritance hierarchy for common display screens, overriding methods to implements new content types, and separating loading user data from the UI through abstraction

**Space Defense (Android App)** Dec 2021 - Jan 2022

github.com/sauravbanna/SpaceInvaders

- Created an Android application inspired by the game Space Invaders
- Independently learnt and worked with the Android SDK in Java from scratch, including working with ImageViews, Activities, Immersive Mode, and Gesture Detection
- Prioritised maximum compatibility and performance with all devices through SDK level checking, and all screen sizes through scaling

**EasyToMako (WaffleHacks 2022 - Winner: Best Use of Data)**

- Collaborated in a team of 4 to create a prototype app that scans the user's fridge and suggests recipes based on available ingredients from database of 500,000 recipes
- Designed the prototype's UI and simulated user interactions using Figma

## 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