

## Sparsh Trivedy

Year 2, Computer Science Major

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[personal website](#)

[github.com/sparshtrivedy](https://github.com/sparshtrivedy)

### Technical Skills

- **Programming:** Java, C++, C, C#, JavaScript, TypeScript, SQL, Python, R
- **Front-End:** HTML, CSS, React.js
- **Back-End:** Node, Express.js, PostgreSQL, .NET, Entity Framework
- **Tools:** Git, Bootstrap, pgAdmin, Postman, Postbird, Azure Data Studio, Docker, Swagger
- **Testing:** JUnit, Mocha, Jest, xUnit

### Work Experience

**BGC Engineering Inc, Vancouver, BC**

Sep 2022 - present

Web Developer Co-op

- Developed an “Instrument Reading Attribute Table” to display all data associated with Instrument Readings
  - Created GET and POST endpoints to fetch and update data in the table as new readings were added, updated, and deleted through the associated forms.
  - Wrote Linq queries to fetch data from tables under different databases and to filter the data based on the client.
  - Performed data seeding for the table using Entity Framework migrations.
  - Added quick actions for filtering table, zooming to specified instrument location, downloading table data as PDF, viewing/editing selected reading.
- Created modal pop-up for adding new instruments
  - Implemented the front-end (in React.js) for the two modals that allow users to add instruments to a location and even copy data from an existing instrument.
  - Created endpoints to search the location and instrument dropdowns by keyword.
  - Collaborated on developing the copy instrument service and unit tests (in xUnit) for copying data from existing instruments.
- Refactored our Instrumentation Enums Controller to have a single generic endpoint for all our Enums instead of having separate endpoints for each.

### Technical Projects

**Personal Budget API – Personal**

Aug 2022

- Developed a REST API that is used to keep track of an individual’s personal budget.
- Implemented a relational database using PostgreSQL with two tables – (1) keeps track of the budget categories and their balances (2) keeps records of all transactions between the budget categories.
- Implemented the server using Express.js that handles the HTTP requests.
- Connected the server and the database using node-postgres.

**Vibing – Personal**

Jul 2022

- Developed a front-end application that allows a user to browse songs, add them to a playlist and save it to Spotify.
- Implemented this functionality using the Spotify API.

- Enabled functionality that allows users to rename their playlists and make changes to their playlist before saving it to Spotify. [link](#)

### **Note-Maker – Personal**

May 2022

- Developed a web app using React.js that sends the topic for notes as plain text prompts to OpenAI API and displays the results in a list.
- Implemented a form that allows user to enter a topic which on submitting displays a 5-point summary of the topic and a log of all results, sorted from newest to oldest.

### **Image Partitioning Trees – Academic**

Mar 2022

- Constructed a binary tree (PTree) to represent an image. The nodes of the PTree represent rectangular regions of a PNG image.
- Enabled operations that prunes the PTree, resulting in a more pixelated image.
- Implemented functions to flip the PTree both horizontally and vertically and a render function to observe the effects of these operations on an actual image.

### **Café Kiosk – Academic**

Dec 2021

- Developed an interactive coffee ordering application in Java with a GUI using the Java Swing library.
- Implemented functionality that allows a user to order multiple customized drinks, generate bill, check order summary, and keep a log of when a drink was added or removed from the cart.
- Enabled save and load functionality using an API.
- Implemented with software design principles in mind and tested using JUnit.

## **Volunteer Experience**

### **UBC Rover Engineering Design Team, Vancouver, BC**

Sep 2022 – present

Software Team Member

Work on developing a robot using ROS and a GUI for the same using ROS Qt library.

### **Science Undergraduate Society UBC, Vancouver, BC**

Jul 2022 – present

Academic Experience Coordinator

Work towards enhancing academic experience of UBC Science students through events and info sessions.

### **UBC Design League, Vancouver, BC**

Sep 2022 – present

Web Developer

Updated the website for UBC Design League.

## **Education**

### **University of British Columbia, Vancouver, BC**

Sep 2020 - present

Bachelor of Science, Computer Science Major

Cumulative average: 83.8%

**Outstanding International Student Award, 2020**

## **Interests**

Reading, Tabla, Swimming, Sketching, Cooking