# Aditya Singh

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#### EDUCATION

### **Dalhousie University**

Bachelor of Computer Science (Co-op), GPA: 3.94

September 2023 - May 2027

- Sexton Scholar (2023 Present) and recipient of the Dalhousie In-Course Scholarship.
- Dean's List (Fall 2023, Winter 2024): academic excellence and achieving a cgpa of 3.7+ in consecutive semesters.
- Relevant Courses: Data Structures & Algorithms, Systems Programming, Database Systems, Software Development, Discrete Math in Computer Science, Practical Data Science, Experimental Robotics.

## EXPERIENCE

#### Administrative Assistant

Sep 2023 – Aug 2024

Tidal Car Rentals

Dartmouth, NS

- Maintained and optimised the company's website using Wordpress, receiving 250+ visitors weekly and reducing loading times by 25%
- Streamlined documentation processes by developing an automated script that created and linked Google Drive folders for each active vehicle, enhancing organization and reducing manual workload.
- $\bullet$  Created internal documentation and SOPs for administrative tasks, reducing onboarding time by 40% and eliminating repetitive queries.
- Managed customer support, effectively addressing over 50 inquiries weekly, ensuring high level client satisfaction.
- Organized and coordinated 20+ vehicle calendars and booking schedules, ensuring smooth daily operations.

#### **PROJECTS**

#### LandSat Reflectance Project | Python, Flask, C#, JavaScript, CSS

September 2024

- \* Developed a web app that supports the comparison of ground-based observations with LandSat Data by allowing users to define a target location, receive notifications when LandSat is to pass over that location, and access and display relevant LandSat Satellite Data.
- \* Developed a Flask-based backend to handle user queries, retrieve Landsat imagery, and process geospatial data.
- \* Integrated a Google Maps API interface in the front-end to allow users to select locations for satellite imagery.

# Compiler Frontend for JSON Parsing | Python

November 2024

- \* Developed the front end of a compiler using a DFA-based scanner for lexical analysis and a recursive descent parser for syntactic and semantic validation of JSON input.
- \* Implemented tokenization, parse tree generation, and semantic checks to detect errors like duplicate keys and inconsistent data types, with clear outputs and detailed error reporting.
- \* Generated parse trees for structured JSON representation, providing a visual aid for debugging and further AST (Abstract Syntax Tree) transformations.

# Freakbob | Discord Bot | Python, Discord API, SQLite

February 2025

- \* Deployed a feature-rich Discord bot to automate administrative tasks such as user moderation, role assignments, and message filtering, in a server with 220 members.
- \* Worked with Discord API to implement commands for banning, kicking, muting users and managing roles.
- \* Implemented automated logging and a warning system, reducing manual moderation workload by 60%.
- \* Deployed the bot on a Pylex cloud server for 24/7 uptime, ensuring consistent availability and performance.

#### TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS

Frameworks: React, Node.is, Flask, JUnit, WordPress

Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

Libraries: pandas, NumPy, Matplotlib