# Fardin Abdulla

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### **Technical Skills**

Languages: Python, C, C++, HTML, CSS, Tailwind CSS, Java, JavaScript, TypeScript, Matlab, R

Frameworks/Libraries: React JS, Next.js, Node.js, Matplotlib, Spring/Spring Boot, MockMvc, JUnit

Tools/Databases: PostgreSQL, Firebase, DataStax, Git, GitHub, Visual Studio Code, R studio

### Education

Simon Fraser University | BSc. Computing Science

September 2026 (expected)

### **Work Experience**

**Personal Tutor** | *Self-Employed* 

January 2024 - Present

- Helped a secondary student learn and revise different subjects, such as Data Structures and Algorithms (DSA), Math and Statistics.
- Enabled students to achieve significant academic improvements, with an average increase of 15% in overall course grades.

# **Projects**

### Machine Learning Project | Github

December 2024

Introduction to Artificial Intelligence

Python, NumPy

- Implemented a Naïve Bayes classifier in Python with Laplace smoothing, achieving 80% accuracy for MNIST digit recognition by leveraging probabilistic methods.
- Built a three-layer Deep Neural Network with hyperparameter optimization, achieving 97% accuracy on MNIST through advanced training techniques.
- Created a Recurrent Neural Network for word-level language detection, achieving 85% accuracy by effectively modeling sequential data patterns.

# Personal Portfolio Web App | Github

December 2024

Personal project

Spring Boot, Next.js, React, TypeScript, Tailwind CSS

- Developed a full-stack personal portfolio website using Java Spring Boot for the backend and Next.js with React, Tailwind CSS and TypeScript for the frontend, enabling real-time integration of user-specific data.
- Integrated dynamic and interactive features such as real-time music activity (Last.fm API), Discord platform status (Lanyard API), 3D map visualizations (Google Maps API), and an AI chatbot (Google Gemini API) to enhance user engagement.
- Deployed the frontend on Vercel and backend on Render, ensuring proper CORS configurations to enable secure API interaction.

### JourneyGenie Web App | Github

August 2024

Introduction to Software Engineering

Spring Boot, JavaScript, PostgreSQL, Bootstrap, MockMvc, JUnit

- Developed a full-stack travel planning web application using Java Spring Boot for backend and HTML, CSS, JS for frontend, enabling users to efficiently plan and manage travel itineraries.
- Build a **Budget Tracker** with the Open Exchange Rates API to track travel expenses across multiple currencies, providing users with accurate expense management tools.
- Developed **Weather Forecast** with the OpenWeatherMap API to deliver real-time weather updates for user-selected destinations.
- Leveraged 3 Google Maps APIs to suggest nearby attractions, restaurants, and activities tailored to users' itineraries.
- Implemented user authentication and data storage with PostgreSQL, enabling users to save, retrieve, and manage personalized trip plans, routes, and checklists securely.
- Developed an AI-powered chatbot using the Google Gemini API to provide dynamic travel assistance, enabling users to efficiently plan trips and resolve inquiries.
- Integrated the Google Place Overview API and implemented a database system to allow users to save destinations in a personalized checklist, ensuring easy access and better trip management.

# Collision-Resistant Hashmap for FriendsBook - Social Networking Platform | Github

April 2024

Data Structures and Programming

C++, Object-Oriented Programming, Data Structures

- Developed a console-based social networking application in C++ enabling users to create, modify, search, and manage profiles, with a focus on optimizing search functionality.
- Engineered a collision-resistant Hashmap using linear probing, reducing data retrieval time by 30% and improving the application's performance under high collision scenarios (31% collisions).
- Designed and implemented efficient algorithms for profile management, ensuring uniqueness and maintaining a sorted collection within fixed memory constraints.