

# Uday Daroch

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## EDUCATION

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### University of Canterbury

*Bachelor of Software Engineering with Honours (4th year)*

Christchurch, NZ

*Feb. 2022 – Nov 2025*

## EXPERIENCE

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### University Programming Tutor - University of Canterbury COSC121

*Feb 2025 – Present*

- **Concept Explanation** Guided students through programming concepts, breaking down complex topics into clear, understandable explanations.
- **Code Review and Debugging** Assisted students in reviewing and debugging code, helping them identify errors and improve problem-solving skills.
- **Hands-on Learning** Developed interactive exercises and coding challenges to reinforce learning and build practical experience.
- **Assignment Support** Provided structured guidance on coursework, ensuring students understood requirements and best coding practices.

### Software Engineering Internship - Fleetpin

*Nov 2024 - 1 Feb 2025*

- **Batch Query Optimization** Optimized batch processing queries, improving application performance and reducing processing time for large datasets.
- **API Development and Integration** Designed and implemented robust APIs, ensuring seamless communication between frontend and backend services.
- **Service Worker Implementation** Developed service worker functionalities to enable offline capabilities for the application, enhancing user experience.
- **Bug Fixing and Frontend Design** Resolved critical bugs, enhanced UI/UX, and contributed to form design using Vue.js to improve usability and functionality.

### Grocery Assistant - Pak'n Save

*Dec 2020 - Aug 2021*

- **Stocking and Rotation** Replenished and organized fresh produce displays, ensuring items were rotated to maintain quality and minimize waste.
- **Quality Assurance** Monitored and removed damaged or expired produce, maintaining high standards of freshness and presentation.
- **Customer Assistance** Helped customers locate specific produce items, answered inquiries, and provided recommendations based on preferences.
- **Inventory Management** Conducted stock counts, reported discrepancies, and updated inventory records to ensure accurate stock levels.
- **Team Collaboration** Worked closely with the produce team to manage deliveries, restocking, and cleaning tasks efficiently.

### Kitchen Hand and Waiter staff - Saket Indian Restaurant

*Feb 2018 - May 2020*

- **Kitchen Hand Duties** Assisted chefs with food preparation, maintained a clean and organized kitchen, and ensured compliance with hygiene standards.
- **Waitstaff Responsibilities** Provided table service, took orders, delivered food and beverages, and managed customer inquiries.
- **Cleaning and Maintenance** Performed dishwashing, equipment cleaning, and end-of-day cleaning tasks to maintain a safe and sanitary environment.
- **Team Collaboration** Worked collaboratively with kitchen and floor staff to ensure smooth operations and excellent customer service.

## SOFTWARE PROJECTS

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**Gardeners Grove Application (Uni Group Project 1)** | *Spring Boot, Thymeleaf, SQL* In process

- Developed a social platform for gardeners to manage and share their gardens.
- Used Spring Boot and Thymeleaf to build a robust backend and dynamic frontend.
- Implemented an SQL database to store garden and plant information, user profiles, and friendships.
- Enabled users to add information about their gardens, add plants, and share gardens with other users.
- Provided features to view public gardens, add or remove friends, and interact with the gardening community.

**Scrumboard Management System** | *React, Node.js, Express, Neon Database* In process

- Inspired by the SENG302 course, developed a custom Scrumboard management system to improve team productivity.
- Implemented user roles, allowing admins to create and assign Scrumboard tasks for specific dates.
- Enabled team members to self-assign tasks, create sub-tasks, and track progress by ticking off completed items.
- Used React.js for the frontend and integrated drag-and-drop libraries for intuitive task management.
- Developed the backend with Node.js and Express, and used the Neon database for data storage.
- The server and client are visible on Vercel for public access (however they are currently in progress)

**Cycleways (Uni Group Project 2)** | *JavaFX,SQL,Gradle,Leaflet, GraphHopperAPI, OpenStreetMapAPI* Nov 2023

- Developed a cycling application utilizing raw crash data from Waka Kotahi (800k entries).
- Implemented advanced filtering and sorting for improved user experience.
- Integrated route crashes onto the map with optimized clustering and lazy loading.
- Utilized GraphHopper API for accessing bike route data stored as GeoJSON.
- Constructed a robust and user-friendly interface using JavaFX and SQLite.
- Employed MVC and Spiral models for development.
- Ensured high quality with rigorous testing using Cucumber and JUnit.

**Backend API with SQL(Uni Individual Project 1-grade(98/100))** | *Node, Express, TypeScript,SQL, Postman*Jun 2024

- Designed and implemented a robust backend API for a petitions website, facilitating user interactions such as login, logout, account updates, petition creation, and supporting others' petitions.
- Utilized SQL for database management, executing queries to efficiently store and retrieve data related to user accounts and petitions.
- Implemented various endpoints to enable client-server communication, ensuring seamless interaction with the API.
- Thoroughly tested the API functionalities using Postman, ensuring reliability and robustness.
- Followed the MCR (Model-Controller-Route) architectural pattern for a well-structured and maintainable codebase.

**Frontend Application (Uni Individual Project 2-grade(96/100))** | *React, Material-UI (MUI), CSS* Jul 2024

- Developed a single-page application (SPA) using React to interact with the backend API for a petitions website, allowing users to register, log in, create petitions, support other petitions, view public petitions, and update account information.
- Implemented responsive and visually appealing components using Material-UI (MUI), leveraging its built-in CSS for consistent and maintainable styling.
- Ensured seamless user experience by managing application state effectively with React hooks, context API, and Zustand for storing user IDs and tokens, to maintain session state.
- Implemented client-side routing for dynamic navigation between different pages and features within the application.

## TECHNICAL SKILLS

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**Languages:** Java, Python, C, SQL, JavaScript, HTML/CSS, PHP

**Frameworks:** React, Vue, Flask, JUnit, CucumberTesting, Vite, Leaflet, Thymleaf, Springboot

**Developer Tools:** Git, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse,MySQL Workbench,Bootstrap, Google Cloud clustering service, Google colab, Vercel

**Libraries:** NumPy, Matplotlib, Dask,Panda, MaterialUI, apollo-client

## REFERENCES

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**Morgan English(Uni senior tutor):** morgan.english@canterbury.ac.nz

**Andrew Bainbridge Smith (Senior Lecture):** andrew.bainbridge-smith@canterbury.ac.nz