Uday Daroch

Curriculum Vitae

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https://udaydaroch.github.io/
(My Portfolio)

Qualifications and Current Studies:

University of Canterbury, Christchurch, NZ
Bachelor of Software Engineering with Honors, Expected Graduation date: 12/2025
Current GPA: 5.59

Christchurch Boys' High School, Christchurch, NZ
NCEA Level 3 with Excellence, 11/2021

Projects:

Ecom Website:

- Developed an e-commerce website featuring separate functionalities for admin and normal users.
- Implemented user authentication system with signup option for new users to access the dashboard.
- Users can view products, add them to their shopping cart, and place orders for pickup or delivery.
- Utilized MySQL database connected to the website via PHP to store user data and product information.
- Implemented SMTP protocol with auto-generated token method for password reset, ensuring secure communication.
- Admin functionalities include adding, removing, updating products, and managing availability for users.
- Admin dashboard provides insights such as user management and filters for analysing popular items.
- Designed the website's HTML and CSS using Bootstrap version 5.3 for a modern and responsive layout.
- Implemented session-based login and logout functionality, allowing users to securely access and exit the website.
- Users can log in to access their dashboard and view current orders, purchase history, and change account details.
- The session method ensures seamless and secure user authentication throughout their browsing session.
- Upon logging out, the session is terminated, enhancing security and privacy for the user.

Cycleways application:

- Utilized raw data from Waka Kotahi crash data(800k crash data) for a cycling application.
- Successfully tabulated the data and implemented advanced filtering and sorting methods to optimize user experience.
- Successfully integrated the route crashes onto the map, using optimized clustering methods and lazy loading.
- Leveraged the GraphHopper API to access bike route information stored as a GeoJSON file, converting route geometry into coordinates. These coordinates were converted into a route, using Leaflet polyline objects for visualization, and then displayed on a map integrated via the OpenStreetMap API.

- Employed both the MVC model and Spiral model for development, ensuring structured and iterative progress.
- Managed version control using Git and effectively resolved merge conflicts using IntelliJ.
- Utilized JavaFX and SQLite technologies to construct the website, ensuring a robust and user-friendly interface.
- Implemented rigorous testing methodologies, including Cucumber and JUnit, to ensure high quality and meet functional requirements.

My Portfolio:

- Developed a personal portfolio showcasing my skills, projects, and professional background.
- Included links to my social media profiles, such as LinkedIn, to provide a comprehensive overview of my online presence.
- Utilized Bootstrap version 5.3, along with HTML, CSS, and JavaScript, to design and structure the portfolio content.
- Incorporated interactive elements to express my personality and highlight key accomplishments.
- Hosted the portfolio on GitHub Pages, making it easily accessible https://udaydaroch.github.io/

Java Swing Game Project:

- Developed a football team management simulation game for single-player engagement.
- Players can buy, sell, and train team members and acquire items to boost player stats.
- Implemented a dynamic opponent generation system for challenging gameplay.
- Utilized Java concepts like the builder pattern and interfaces for creating player profiles and standardizing player behaviour.

Basic Client Server Application (Socket Programming):

- Developed server and client programs in Python.
- Utilized TCP sockets for communication.

Unity/C# Game Development:

- Created an Educational game for rapid mathematic using Unity and C#.
- Implemented gameplay resembling a subway surface game.

Python Recursive Descent Compiler:

- Developed server and client programs in Python, focusing on scanner and parser.

Future Project:

- Planning to develop a note-taking website for students.
- Features include account creation, course specification, and note sharing.
- incorporating search functionality based on course codes and dates.
- Implementing a rating system for note quality.

SKILLS:

- Comfortable with many IDE's (integrated development environment), including VSCode, ECIPLISE, wing, PyCharm, IntelliJ.
- Personal Experience with Bootstrap, HTML, CSS, and JavaScript for web development.
- Good knowledge of SQL.
- Experience in sprint based(Agile) Software develop method and the spiral development method.
- Experience with Git for version control.
- Good experience with server-side programming languages - Python, Java, C and php.
- Good experience with client-side programming languages – HTML, CSS, and JavaScript, also including Bootstrap which consists of both CSS and JavaScript.
- Basic Blender modelling knowledge.