Daniela Gallegos Dupuis

https://danigallegdup.github.io/ danigallegdup danigallegdup

Education

University of Victoria Sept 2021 – Dec 2025
B.Sc. in Computer Science (NSERC Undergraduate Student Research Award Winner)

National University of Singapore Aug 2024 – Dec 2024
Computer Science Exchange Student (One World Scholarship Winner)

Experience

University of Victoria Victoria, BC
Undergraduate Computer Science Research Assistant Jan 2024 – Jul 2024
- Member of the VIXI Research Lab.
- Built automated analysis tools and reproducible HCI Experiment using Python and eye-tracking hardware for real-time HCI experiments.

University of Victoria Victoria, BC
Computer Science Teaching Assistant, CSC110 Sept 2023 – Dec 2023
- Led labs on Python programming and OOP.
- Provided mentorship and debugging support for 100+ students.

University of Victoria Victoria, BC
Computer Science Teaching Assistant, CSC106 Jan 2023 – Apr 2023
- Taught weekly labs on SQL, HCI, and data abstraction.
- Delivered guest lectures on web development.

Schneider Electric Victoria, BC
Firmware Engineering Intern May 2022 – Dec 2022
- Built automated firmware validation tests with Pytest.
- Performed lab work involving hardware integration, CPU replacement, and system wiring.

Google Remote
Software Product Sprint May 2022 – Aug 2022
- Designed and developed a Web App using Java, JS, HTML/CSS.
- Built and deployed the backend on GCP using App Engine and Datastore.

Massachusetts Institute of Technology Boston, MA
MIT Reality Hackthon Participant Jan 2023
- Co-created Quest2 VR Application, in C# that addresses mental health challenges.
- Selected as the only UVic participant to compete at the MIT Reality Hackathon 2023.

Projects

Scalable Stock Trading System github repo
- Built a distributed day trading platform capable of handling 17,000+ simulated users.
- Designed a custom FIFO matching engine, JWT-secured APIs, and Redis-based concurrency control.

Wave Rider: Music-Driven Rhythm Game github repo
- Developed a rhythm game in Godot synchronized with beat and onset detection using custom MIR scripts.
- Enabled custom song imports and automated beat/chroma/onset extraction via Python (Librosa).

Stock Pulse: Machine Learning Project github repo
- Implemented Random Forest, SVM, and LSTM models for stock trend forecasting.
- Performed time-series feature engineering and investment strategy evaluation.