Daniela Gallegos Dupuis

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Technical Skills

Programming Languages: Python, Java, C, C++, C#, TypeScript, SQL, Bash
Computer Science Foundations: Data Structures, Algorithms, Object-Oriented Design
Distributed Systems: Concurrency, Microservices, Replication, Sharding, Load Testing, TCP/IP
Engineering Practices: Version Control, Automated Testing, Debugging, Code Review, CI/CD

Experience

Firmware Engineering   May 2022 – Dec 2022
Schneider Electric

> Extended Schneider's Pytest validation framework to interface power meters with Jenkins CI test racks, resolving ticketed network failures within Agile sprint workflows through systematic troubleshooting and validating firmware reliability across large hardware systems.

Human Computer Interaction Research Assistant   Jan 2024 – Jul 2024
VIXI Lab, University of Victoria

> Performed hardware–software integration with camera systems in Python for a research environment, troubleshooting system interactions and meticulously documenting procedures, configurations, and results to ensure accurate records for academic data analysis.

Computer Science Teacher Assistant   Jan 2023 - Dec 2023
Faculty of Engineering and Computer Science, University of Victoria

> Acted as first-line technical support for students, diagnosing and resolving application and environment failures through code review, live debugging, and system-level analysis, in Python and SQL.

UVic GDSC Technology Leader   Sept 2023 – Apr 2024
Google Developer Student Club, University of Victoria

> Led hands-on React and TypeScript workshops, debugging API integration, Git workflows, and client-server failures across student projects.

Projects

Scalable Stock Trading System   GitHub

> Built and tested a JavaScript stock trading API supporting 17,000 concurrent users, resolving nondeterministic load-test failures in a distributed Docker system.

Stock-Pulse: Machine Learning Stock Prediction   GitHub

> Built an LSTM stock prediction model in PyTorch, identifying why it failed to generalize beyond simpler baselines by validating data pipeline and evaluation assumptions, and documenting changes to ensure reliable, comparable results.

Google Software Product Sprint 2022 (SPS)   GitHub

> Built and deployed a Java servlet-based web application on Google Cloud Platform using Google Datastore across a full software development lifecycle.

MIT Reality Hack 2023: ILLE a Virtual Reality Experience   DevPost

> Built a Unity-based VR experience for Meta Quest 2 within an interdisciplinary team, enabling speech-to-avatar interaction and third-person self-reflection using C#, Blender, and Cinema4D in a three day development sprint.

Education

University of Victoria   Sept 2020 – Aug 2025
B.Sc. in Computer Science (2024 NSERC USRA Winner)

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