Daniela Gallegos Dupuis

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

Education

University of Victoria Sept 2021 – Dec 2025
B.Sc. in Computer Science

- **Research Assistant** (NSERC USRA Winner 2024)— Jan – Jun 2024
- **Teaching Assistant** CSC 110: Fundamentals of Programming I —Sept – Dec 2023
- **Teaching Assistant** CSC 106: Interdisciplinary Computer Science —Jan – Apr 2023
- **Technology Leader**, UVic Google Student Developer Club —Sept 2023 – Present
- **EDI Committee Member**, Engineering Student Society — July 2024 – Present
- **Key Coursework:** Database Systems, Operating Systems, Algorithms and Data Structures II

National University of Singapore Aug 2024 – Dec 2024
Computer Science Exchange Student

- **Winner** (One World Scholarship)
- **Key Coursework:** Machine Learning, Optimization Algorithms, Public Speaking, Singapore Society

Experience

Schneider Electric Victoria, BC
Firmware Engineer Intern May 2022 – Dec 2022

- Automated Testing and Debugging: Built Python-based tests with Pytest to validate firmware for ION9000 and PM8000, resolving critical issues in protocols like RSTP to improve reliability.
- Hardware-Software Integration: Performed hardware integration and testing, including CPU replacements and wiring, while collaborating in Agile teams to streamline Deployment workflows and accelerate releases.

Google Remote
Software Product Sprint May 2022 – Aug 2022

- Designed and built (Posted) in a team, a scalable full-stack app using GCP APIs (App Engine, Datastore).

MIT Reality Hackathon Boston, MA Jan 2023
Participant

- Collaboratively created (ILLE), a VR app leveraging C# to address mental health challenges.

Projects

Numeric Data Table Research Experiment github repo

- Integrated Python with eye-tracking hardware for real-time behavioral analysis, automated data pipelines using Pandas/NumPy, and designed experimental setups to generate actionable insights for HCI research.

Stock Pulse: Machine Learning Group Project github repo

- Developed a machine learning system to predict stock trends using time-series data with Random Forest, SVM, and LSTMs, implementing feature engineering and achieving optimized investment strategies.

Streamline-DAQ: Scalable Data Acquisition and Monitoring System github repo

- Engineered a distributed system for real-time data acquisition, utilizing Apache Kafka for ingestion, Python (Pandas, NumPy) for processing, and PostgreSQL/MongoDB for fault-tolerant storage. Designed Grafana dashboards, handling 10,000+ events/sec with low latency, and integrated CERN Open Data for scientific versatility.

Synapse Nexus: Multi-Agent AI for Intelligent Systems github repo

- Created a multi-agent AI framework integrating reinforcement learning, generative models, and NLP, enabling agents to collaboratively solve complex decision-making tasks in dynamic and high-stakes environments.