

Eric Vu

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EDUCATION

University of British Columbia

Bachelor of Science, Computer Science

May 2028 (Expected)

Vancouver, BC

Relevant Coursework: Data Structures & Algorithms, Software Construction, Databases (SQL), Computer Networks, Machine Learning, Artificial Intelligence

EXPERIENCE

UBC Game Development Club

Developer — Umbra (Steam — Coming Soon) • Team of 15

Sep 2024 – Apr 2025

Vancouver, BC

- Resolved 10+ player-reported bugs by turning reports into reproducible test cases, implementing fixes in Godot using GDScript, and validating changes through playtesting and peer-reviewed pull requests.
- Investigated and fixed a combat-system gameplay exploit by adding movement constraints, improving gameplay consistency and reducing unintended player advantages.
- Collaborated in a 15-person cross-functional team using Agile/Scrum practices, contributing through iterative development, code reviews, bug-fix cycles, and regular team coordination.

PROJECTS

LitLink | *SwiftUI, Swift, Gemini API, Speech Framework, Supabase*

- Led a 4-person team to win 2nd place out of 25 teams in a 24-hour hackathon by designing and demoing a working iOS prototype that turns screen time into a reading-based reward system for kids.
- Engineered the app-lock flow, backend, and AI integration to gate restricted apps behind speech-verified reading tasks and 3–5 AI-generated quiz questions with an 80% passing threshold and parent-configurable unlock durations up to 60 minutes.
- Integrated speech verification, Gemini-powered quiz generation, Supabase-backed parent/child data flows, and a parent dashboard tracking WPM, quiz accuracy, and difficult-word activity.

Task Manager | *Angular, Node.js/Express, MongoDB, JWT*

- Developed a full-stack task manager with JWT authentication, refresh-token storage in MongoDB, and per-user data isolation to support secure multi-user access.
- Hardened the API with CSRF protection, Helmet, CORS allowlisting, rate limiting, and input validation; added frontend auth recovery for expired sessions.
- Automated quality checks with GitHub Actions and Playwright smoke tests for login and core task flows to catch regressions before deployment.

Outfit Decider | *React, TypeScript, Express, Supabase, Gemini API*

- Created a full-stack wardrobe application with OAuth sign-in, Supabase Postgres and Storage, and an Express backend proxy that secured Gemini API keys while serving outfit-generation requests.
- Implemented image upload with validation, client-side compression, and persistent storage for both user-uploaded and AI-generated outfit images.
- Designed onboarding and wardrobe-selection flows with guided overlays, multi-tag filtering, and persistent user preferences stored in Supabase metadata.

Trading Strategy Backtester | *C++, Qt, CMake, Catch2/GoogleTest*

- Architected a layered backtesting engine with CSV ingestion, SMA crossover logic, portfolio accounting, commissions, and risk controls while separating core strategy logic from the desktop UI for testability.
- Implemented a parameter-sweep utility for train/test reports across configurable SMA ranges, position sizing, stop-loss, and take-profit settings on datasets up to 200k rows.
- Added CSV and JSON export support for backtest results, enabling easier comparison of parameter sweeps and downstream analysis workflows.

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, C++, R, Swift, HTML/CSS

Frameworks/Libraries: React, Angular, Node.js/Express, Spring Boot, Thymeleaf, Qt, SwiftUI, PyTorch, scikit-learn

Databases/Cloud: MongoDB, Supabase (Auth/Storage/Postgres), SQL

Tools: Git, GitHub, Postman, Jupyter Notebook, Playwright, Jasmine/Karma, Catch2/GoogleTest