Melvin Teo

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EDUCATION

University of British Columbia — Vancouver, BC
Bachelor of Science in Computer Science (GPA: 4.1/4.33) — *Expected Graduation May 2026*
- **Relevant Courses**: Machine Learning & Data Mining, Data Structures & Algorithms, Distributed Systems

EXPERIENCE

Software Engineer Intern — May 2025 – Aug. 2025
Amazon Payments — *Vancouver, BC*
- Engineered a CloudWatch MCP Server in TypeScript for internal teams to automate workflows with AI agents
- Accelerated integration test generation by 90% by leveraging CloudWatch service logs, AI agents, and MCP servers
- Automated CloudWatch metrics comparison with a hybrid shell script and agentic AI workflow with MCP servers

Co-President, Software Development Director, Logistics Director — May 2022 – May 2025
nwPlus - Organizers of the largest hackathons in Western Canada (HackCamp, nwHacks, cmd-f) — *Vancouver, BC*
- Led 55-member team to organize 3 major hackathons, welcoming 1,150+ participants and 79 sponsors
- Managed 6-engineer team shipping 8 projects supporting 1,700+ users
- Spearheaded the largest beginner-friendly hackathon in Western Canada, attracting 100+ first-time hackers

Software Engineer Intern — May 2023 – Aug. 2024
Amazon Prime - Customer Engagement — *Vancouver, BC*
- Reduced onboarding time for PMs by 98% by building a 100% self-service customer state management web app
- Implemented dynamic React forms using JSON Form Schema to populate content from DynamoDB schema
- Refactored Java API controllers to adopt new DynamoDB schema and support JSON serialization

Software Engineer Intern — May 2023 – Aug. 2023
Amazon Prime - Customer Retention — *Vancouver, BC*
- Reduced Prime membership cancellation processing time by 33% by optimizing AWS service configurations
- Refactored CloudWatch dashboards and alarms in TypeScript to improve observability of cancellation traffic
- Simplified QA work in A/B testing by building a browser cookie override tool in Java, saving 15 mins/test

Amazon Future Engineer Intern — May 2022 – Aug. 2022
Amazon Prime - Customer Retention — *Vancouver, BC*
- Retained 10,000+ annual Prime customers by developing targeted retention emails and personalized widgets
- Cut costs by 43% and development time by 49% by automating feature deployment with Bash shell scripts
- Performed manual QA testing and data validation using customer mocking tools

PROJECTS

FlashLearn | *TypeScript, React, Python, FastAPI, PostgreSQL* — May 2025
- Built a language learning app with flashcards featuring translations, grammar notes, and example sentences
- Developed a FastAPI backend with secure authentication, language-aware NLP, and GPT-3.5 integration
- Designed a PostgreSQL schema in NeonDB with folder-based flashcard organization

Expawdition | *TypeScript, React, Express, Node.js, NoSQL* — May 2023
- Won 1st place out of 27 at StormHacks by developing an AI-powered trip-planning app for personalized itineraries
- Built Express/Node.js backend pipeline to process GPT-3.5 output into Google Places/Routes APIs
- Connected React frontend to Express/Node.js backend via Fetch API, resolving CORS issues

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Java, Go, C, C++, SQL, HTML/CSS
Frameworks: React, Express, Node.js, FastAPI, Firebase, Supabase, MongoDB
Developer Tools: AWS, MCP, Git, Docker, GitHub Actions
Libraries: NumPy, Matplotlib, spaCy
Concepts: Test-Driven Development, Generative AI, Distributed Systems, RPC, Microservices, REST API, Full-Stack