

AMANDA YANG

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SKILLS

- **Programming Languages:** Python, Java, TypeScript, JavaScript, Kotlin Multiplatform, C, C++
- **Web/Desktop Technologies & Frameworks:** React, Next.js, HTML, CSS, three.js, WebGL, PyQt, PySide6, Gatsby, URQL, Apollo
- **Frontend Libraries & Design Systems:** TailwindCSS, Chakra UI, Material Design, shadcn/ui
- **Backend & API Technologies:** Node.js, RESTful APIs, GraphQL, Express.js, TypeORM, MikroORM, Conduit
- **Database Systems & Analytics:** Redis, SQL, PostgreSQL, Oracle, MongoDB, NoSQL, NumPy, Pandas
- **Development Tools & Platforms:** Git, GitHub, Gitlab, Docker, Linux, Visual Studio Code, IntelliJ, USD, Houdini, Maya

EXPERIENCE

Software Technical Director Intern · Walt Disney Animation Studios January 2025 — Present

- Engineered and deployed a **PyQt model-view** application to automate complex, multi-parameter batch operations, replacing a manual CLI workflow; integrated with render queuing APIs to reduce user error by **5x** and improve task efficiency by **10x**, incorporating stakeholder feedback from design to rollout
- Developed and debugged **Python** scripts and tools for **Maya** and **Houdini**, automating shot-processing logic, enhancing error handling, and enforcing publish-time validation to improve pipeline reliability and reduce artist overhead
- Operated in a **Linux**-based production environment, leveraging tools to inspect and debug **USD** data, and adjusting render submission configurations to improve render farm stability and throughput
- Collaborated closely with artists, TDs, and engineers across 7 pipeline departments to troubleshoot and resolve production challenges, ensuring seamless tool integration and improving cross-departmental efficiency

Software Developer · UBC AeroDesign Engineering Design Team May 2023 — Present

- Developing a maintainable data interface using **Redis** streams and **Protocol Buffers (protobufs)**, enabling automatic synchronization of telemetry struct changes across backend and frontend
- Built an **Electron**-based frontend that subscribes to **Redis**, transforms telemetry data, and displays live aircraft status, 3D orientation, and flight path using **React** and **Three.js**
- Enhanced **UI/UX** for a **Python**-based **PySide6 (Qt)** ground station GUI, improving mission-critical operations such as target labeling, plane state management, and command execution for autonomous delivery aircraft, increasing user satisfaction
- Developed a single-page desktop app using **Kotlin** (interoperable with **Java**) and **Compose Multiplatform**, leveraging **Jetpack Compose** APIs for **Android**, reducing boot-up time by **120%** and speeding up GUI update process by **2x**
- Worked cross-functionally with hardware and firmware teams to optimize software integration in an **agile** environment

Software Engineer Intern · SynthoCrate (no longer active) January 2024 — April 2024

- Led the design and development of flagship application using **TypeScript**, **React**, and **Next.js**, creating a seamless UI/UX
- Utilized **Python**, **NumPy**, and **Pandas** for efficient data extraction and manipulation from Excel Spreadsheets
- Worked with the project manager to define MVP and feature specifications, ensuring alignment with overall product goals

Web Developer · UBC AeroDesign Engineering Design Team June 2023 — September 2023

- Conducted user interviews and analyzed site analytics to enhance navigation and improve user satisfaction by **60%** through optimized user flows and improved content
- Redesigned the website with a mobile-first approach, improving mobile usability and accessibility, which led to a **30%** increase in mobile session duration and a **20%** decrease in bounce rate
- Developed wireframes and UI elements in Figma, aligning with brand guidelines and **WCAG accessibility** standards

PROJECTS

Digital Time Capsule · Introduction to Relational Databases Ongoing

- Developing a memory app database using **Oracle**, with a **TypeScript**, **React**, **Next.js**, and **Node.js** front-end and **Express.js** back-end, enabling users to store, authenticate, and retrieve multimedia memories securely
- Engineered a normalized schema and ER diagram to optimize table structures, relationships, and data retrieval, reducing redundancy and improving data integrity and performance
- Implemented **SQL** scripts to create and populate tables with primary/foreign keys, unique constraints, and functional dependencies, enabling seamless user interactions, and optimized data consistency and performance

AI Chat App Story Generator · Software Construction II April 2024

- Developed a secure app with user authentication, session management, web attack protection, and **RESTful API** integration
- Integrated **Retrieval-Augmented Generation (RAG)** and utilized **Cohere** and stable diffusion **APIs** for AI-generated content
- Designed with **MVC** pattern, enabling dynamic DOM updates and live messaging using **WebSocket API** and **MongoDB**

EDUCATION

University of British Columbia · Bachelor of Applied Science, Computer Engineering (Co-op Program) May 2027