

# Anthony Qin

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US Permanent Resident

## EDUCATION

### University of Toronto

Bachelor of Science, Specialist Program in Computer Science Co-op

Toronto, Canada

2021 - 2025

## EXPERIENCE

### HOOPP (Healthcare of Ontario Pension Plan)

May 2025 - Present

Cloud Engineer Co-op

- **Developed cloud automation solutions** across **AWS** and **Azure** to streamline infrastructure management, including provisioning, configuration, and large-scale migrations, automating processes for nearly **400 virtual machines**.
- Engineered **monitoring** and **observability** solutions for **100+ cloud applications**, improving error alert accuracy by over 90% through automated health checks and custom monitoring workflows.
- Implemented enterprise security enhancements including Transparent Data Encryption (TDE) on production SQL servers, BitLocker troubleshooting, and security audits for DaaS virtual machines.

### University of Toronto / Diamond Schmitt

January 2025 - May 2025

Undergraduate Researcher – Procedural Generation Research Project

- Developed a **procedural floor plan generation system** using **constraint-based** methods and algorithmic optimization, using the Hierarchical Wave Function Collapse algorithm. Presented the working prototype to **Diamond Schmitt Architects**, leading to potential collaboration and access to real architectural datasets.

### Autodesk Research

May 2024 - August 2024

Software Engineer, HCI & AI Intern

- Developed **Story Visualizer**, a tool leveraging LLMs to help authors visualize and analyze stories through automated story element extraction, infinite canvas visualizations, and AI-generated images.
- Designed and delivered a fully functional web-based prototype that leveraged AI to realize Research Scientists' vision, enabling storytellers to manage narrative elements and visually preview their work.
- Maintained flexible software architecture that allowed for rapid prototyping and adaptation to evolving project requirements
- **Independently researched, designed, and implemented the end-to-end system** (Next.js, LangChain, React Flow), working with minimal oversight and full ownership of technical decisions.

## PROJECTS

### Mirror's Memento - Unity Game

- Collaborated with a 12-person team to develop a Unity-Based 3D puzzle game featuring 15 unique levels.
- Designed and implemented key systems, including dynamic controller support, grid movement, and AI driven hints
- Assisted with the integration of assets and animations, resolving merge conflicts to maintain continuity.
- Published Open beta on [itch.io](https://itch.io), with ongoing updates based on player feedback.

### PintOS Operating System

- Implemented many key parts of the PintOS operating system in C, including Thread Scheduling, System Calls, Virtual Memory Management, and the file system
- Utilized GDB to efficiently test and debug PintOs

### MagnifyAccess, Full-Stack Web App

- Collaborated in a team to develop a full-stack web application for Magnify Access, enabling disabled individuals to apply for disability grants, with a strong focus on accessibility.
- Set up MongoDB object tables and built features to allow grant creators to manage and add new grants on the platform.
- Created and integrated features on both front-end and back-end to enable grant creators to easily add and manage new grants on the platform, using React.js for the front-end and Express.js for the back-end.

## TECHNICAL SKILLS

**Programming Languages:** JavaScript, TypeScript, C, C#, Python, PowerShell, Java, Haskell, Racket, GraphQL, Lua, Scala

**Frameworks & Libraries:** Next.js, React.js, React Flow, D3.js, Tailwind CSS, Material UI, NumPy, Pandas, Express.js, Spring API

**Tools & Platforms:** Git, Docker, Linux, Android Studio, MongoDB, Firebase, SQL, PostgreSQL, Jenkins, Unity, Godot

**Software Development:** Azure, SDLC, OOP, Functional Programming, Design Patterns, Agile & Scrum, Unit Testing, Integration Testing, End-to-End Testing, TDD, CI/CD