Christina Lin

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Skills Summary

- **Languages:** Typescript, Javascript, HTML/CSS, Java, Python, SQL, Assembly, C/C++
- **Frameworks & Libraries:** React, Next.js, Nest.js, Express.js, Casbin, Prisma ORM, Tailwind CSS
- **Tools & Databases:** SQL Server, Git, Linux, CentOS Hosting, Figma

Education

- **University of Toronto - St. George Campus** September 2021 - Present
  Bachelor of Science - Computer Science Specialist, ASIP Co-op

Experience

- **Full-Stack Software Developer Intern** May 2023 - Present
  PMG Holdings - Pallet Management Group, Total Pallet Solutions, GLWP
  - Spearheaded the migration of an **Enterprise Resource Planning (ERP)** application from a legacy ColdFusion application to a modern tech stack.
  - Undertook a comprehensive overhaul of the **SQL Server** database, enhancing database integrity & performance by implementing stricter schema & conventions.
  - Developed the **Nest.js REST API**. Optimized database interactions via **Prisma ORM** & established an **access control & policy management** system using Casbin.
  - Crafted a user-friendly **React.js web app** for seamless interaction with the new API, elevating communication & user experience beyond the original ColdFusion application.
  - Deployed the software ecosystem on **CentOS servers**, ensuring seamless integration & reliability in a production environment.

Projects

- **Communify - Prototype Collaborative Music Platform (Java, Swing)** December 2022
  - Implemented the Artist use case, including the MP3 upload process, data persistence, & metadata parsing.
  - Designed an intuitive & user-friendly UI, utilizing the FlatLaf library to enhance user experience with a modern look.
  - Gained a strong grasp of SOLID & Clean Architecture principles, alongside effective coding practices in a large team.
- **COVID Sentimentality - Data Congregation & Analysis Tool (Python)** December 2021
  - Implemented the data-scraping process with the **Twint** library for extensive Twitter data extraction & analysis.
  - Utilized **Pandas** to analyze & manipulate emotional indices within extracted tweets data.
  - Developed the algorithm to calculate indices using a word-emotion lexicon, employing approximate & phonetic matching for precise results.
- **Voter Authentication System - Reconceptualized Modern Voting System (Python)** October 2021
  - Implemented ID authentication against an existing database, ensuring secure access control in the system.
  - Utilized **Pytesseract** & **OpenCV** libraries to parse ID information via optical character recognition (OCR), streamlining the voting process.
  - Recognized as a **finalist** in the 2021 McMaster Engineering Challenge.
- **Dungeon Crawler - Solo Game Development (Java, Slick2D, LWJGL)** June 2020
  - Developed algorithm for the Spelunky-style procedurally-generated parallax maps.
  - Implemented player movement, NPC traversal & attack algorithms, acquiring proficiency with **AI search algorithms.**
  - Strengthened understanding of recursion via the implementation of modular algorithm designs, underscoring a solid grasp of fundamental computer science principles.
- **CoFit - Health & Fitness Mobile Application (Figma, Marvel)** March 2020
  - Coordinated team & introduced the overarching design principles, ensuring a cohesive vision throughout the project.
  - Utilized **Figma** to design intuitive & user-friendly applications, contributing to a seamless & engaging user experience.
  - **Winning application** at the Waterloo Catalyst Conference.
- **Brawler - Solo Game Development (C++, Qt Creator)** June 2019
  - Implemented four distinct character movement & skillsets across dynamic environments.
  - Demonstrated expertise in menu design & a solid understanding of fundamental game development principles.
  - Showcased experience in developing applications from scratch without relying on external libraries, demonstrating a hands-on approach to problem-solving & innovation.

Honours and Awards

- Horatio Alger Association National Entrepreneurial Scholar 2021
- McMaster University Engineering Challenge (MEC) Finalist 2021
- Two-Time University of Waterloo Catalyst Program Project 2020
- McHacks Winner of Best UI/Design 2020