

Justin Lau

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TECHNICAL SKILLS

Languages: Python, JavaScript, Java, HTML/CSS, C#, C/C++
Libraries/Frameworks: React, ASP.NET Core, Node.js, Material-UI
Databases: MySQL, MongoDB, Azure SQL DB
Tools: Git, Github, Linux, Azure IoT, JSON, REST APIs, Figma, Unity, Blender

WORK EXPERIENCE

VR Software Developer Intern

May 2023 — Aug. 2023

BCS Automation

Belleville, ON

- Designed the infrastructure of **Canada's VR HoloShip platform**, enabling real-time virtual ship monitoring
- Built web server infrastructure with **ASP.NET Core & Azure IoT Hub**, boosting data ingestion by **250%**
- Developed a database with **MySQL & Azure** to store historical data, improving data analytics
- Enhanced data accuracy by **80%** by linking the **VR platform** to servers via **websockets & RESTful APIs**
- Provided servers with **100+** realistic ship testing signals by developing **22 industrial PLC Raspberry Pi** systems in **Python** with **Modbus TCP & AMQP** network communication protocols

Lead Game Developer

Nov. 2020 — Jun. 2022

Legion Studios

Toronto, ON

- Developed **Lua** games for a studio with **12,000 followers**, achieving **100,000+ plays & 1,000+ asset sales**
- Coordinated agile scrum standups with **10+ developers**, ensuring smooth script tests/deployment to codebase
- Increased **playtime by 25%** by developing scalable inventory & quest systems via global functions & data store

Software Developer Intern

Jun. 2021 — Aug. 2021

HealthSmart.ai

Toronto, ON

- Developed a secure EMR integration prototype, enabling health data accessibility for patients & doctors
- Built 3D patient visualization pages using **React & Three.js**, boosting diagnostic accuracy by **25%**
- Designed wireframes, info cards, & icons in **Figma, Material-UI, & React**, improving webpage visuals

Lead Organizer

Sep 2020 — Jun 2021

LighthouseHacks.ca

Mississauga, ON

- Led a team of 10 executives to organize, promote, and launch an international hackathon
- Attracted **250+ participants** from **10 countries** and generated **\$40,000+** in sponsorship prizes

PROJECTS

IntelliPaint | *MongoDB, Express.js, React.js, Node.js, Tailwind CSS, OpenAI API, Cloudinary*

- Developed an AI art generation app using the **OpenAI API** to make high quality art from text prompts
- Created a showcase section with **Tailwind CSS and React**, enabling users to search, filter, & download art
- Built **REST endpoints** with **Express.js** to connect to a **MongoDB cluster** & access images in Cloudinary

RoomBuddy | *React.js, Mongodb, Express.js, Node.js, Tailwind CSS*

- Launched a roommate pairing service app, securing user pairings based on lifestyle metrics
- Used React to build out the front-end with Tailwind CSS, Mongodb for realtime database and user authentication

Administrative Discord Bot | *Python, Flask, OpenWeatherMap API, Discord API*

- Developed a Discord bot to help admins manage **500+ members** in **25+ servers** via message moderation
- Built text games with **Discord's API & JSON files** to boost server activity, increasing engagement by **30%**
- Used **HTTPS GET/POST** requests to via **OpenWeatherMap's API** to give **live** weather forecasts for servers

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Applied Science (BASc) Computer Engineering

Sep. 2022 — Present

Awards: Nortel Networks Scholarship, Professional Engineers of Ontario Scholar