

ETHAN CHEN

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EDUCATION

University of Waterloo

Bachelor of Applied Science in Computer Engineering

Sep. 2024 – Apr. 2029

Waterloo, Ontario

TECHNICAL SKILLS

Languages: Python, Java, C#, C++, HTML/CSS, TailwindCSS, TypeScript, React, Redux, NextJS, ExpressJS, SQL (Postgres), MongoDB

Developer Tools: VS Code, VS Community, Eclipse, Android Studio, Unity3D, NodeJS

Technologies/Frameworks: GitHub, Vercel, AWS S3, AWS Lambda, Tauri, .NET

EXPERIENCE

First Tech Challenge Robotics Team, Strathcona-Tweedsmuir School

September 2022 – March 2024

Lead Programmer

Okotoks, Alberta

- Contributed to increasing the team's **divisional ranking by over 15 positions** and entering provincial qualifications in **less than a year** by developing effective Java code for the robot using Android Studio to compete in the **autonomous** phase.
- Coordinated** under a **learning mindset** with teammates during **fast-paced** match intermissions to **troubleshoot** the robot.
- Adapted** to alliance teams by **initiating** strategic **communication** before the match to optimize the overall alliance score.

Setford Consulting & Technology Ltd.

August 2023 – October 2023

Volunteer Front-End Web Developer

Calgary, Alberta

- Developed "structure3d.com" using JavaScript to manipulate the DOM and build visual effects, **enhancing user engagement**.
- Designed and implemented a **responsive, user-friendly interface** using TailwindCSS, significantly boosting retention rates.
- Bolstered **communication** skills through regular **collaboration** with clients, ensuring alignment with their requirements.

PROJECTS

Problem Set Assistant | TypeScript, NextJS, React, Redux, TailwindCSS, PostgreSQL, Vercel, AWS S3, AWS Lambda

July 2024

- Developed a NextJS and React **full-stack** web application hosted on Vercel that helps the user focus on questions to improve on.
- Utilized **AWS Lambda** to process user-uploaded PDFs into images readable by **OCR (TesseractJS)** stored in **AWS S3** buckets.
- Implemented **PostgreSQL** to store users and sessions as well as organize user files stored on S3.

To-do list Desktop Application | TypeScript, NextJS, React, Tauri, TailwindCSS

March 2024

- Developed a desktop application by using Tauri to render a NextJS application in a window.
- Implemented Todoist **REST API** and OAuth to reference a user's to-do list.
- Used Todoist **REST API** to display a user's data as a traditional to-do list or on a calendar.

Real-time Mathematical Rendering Hack the North 2022 Project | C#, .NET Windows Forms

September 2022

- Developed a desktop application using .NET Windows Forms to render mathematical notation in real-time.
- Actively learned **collaboration** capabilities on GitHub with hackathon teammates.
- Improved **presentation** skills by explaining the project to judges and observing speaking strategies demonstrated by teammates.

First Person Video Game | C#, Unity3D

September 2021

- Utilized object-oriented programming to develop classes assigned to "GameObjects" to maintain an organized system.
- Implemented user-friendly multiplayer capabilities through the integration of the Photon Networking Engine.
- Ensured positive game quality by conducting playtesting with volunteers, **documenting** and addressing their concerns.

AWARDS

University of Waterloo President's Scholarship of Distinction

July 2024

Finished Grade 12 with a top 6 course average of over 95%.

University of Waterloo

The Timothy Stiles Memorial Award

June 2024

Awarded for the most outstanding mathematical achievement in senior school.

Strathcona-Tweedsmuir School

The Dr. Dorothy Goldstein Memorial Prize for Senior School Science

June 2024

Awarded for the most outstanding performance in senior school science.

Strathcona-Tweedsmuir School

Canadian Senior Mathematics Contest Certificate of Distinction

December 2023

Ranked in the top 25% of all contestants who took the 2023 Canadian Senior Mathematics Contest.

University of Waterloo