

ETHAN CHEN

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TECHNICAL SKILLS

Languages: TypeScript, Python, Java, C#, C++, SQL (Postgres), HTML/CSS
Frameworks/Libraries: React, Redux, NextJS, ExpressJS, TailwindCSS, .NET, Tauri
Developer Tools: GitHub, Jira, Docker, VS Code, VS Community, Eclipse, Android Studio, Unity3D, NodeJS
Cloud/DevOps: Vercel, AWS S3, AWS Lambda, Neon Serverless DB, MongoDB

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.
- Facilitated **strategic communication** with alliance teams to leverage the alliance's strengths, improving match scores by **20%**.

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

Gamified Speaking Trainer GeeseHacks 2025 Project | *JavaScript, NextJS, React, TailwindCSS, PostgreSQL* **January 2025**

- Exercised **agile** team collaboration to design and develop a web app leveraging ElevenLabs and Gemini to assess speaking skills.
- Engineered a **scalable** PostgreSQL database schema to efficiently manage user data and session information.
- Enhanced the frontend to read/write to the database using Prisma ORM, storing the users' profiles and AI-generated evaluations.

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 areas for improvement.
- 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.

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.

EDUCATION

University of Waterloo **Sep. 2024 – Apr. 2029**
Candidate of BSc in Computer Engineering *GPA: 4.0/4.0*
Waterloo, Ontario

AWARDS

University of Waterloo President's Scholarship of Distinction **July 2024**
Awarded for a top 6 course average of 95%+ in Grade 12. *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*