

Sean Zhang

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SKILLS

Languages: Python, TypeScript, JavaScript, C, C++, Rust, Golang

Tools & Frameworks: React.js, Next.js, Node.js, Docker, MongoDB, Jest

EDUCATION

University of Waterloo

Sep 2019 - Apr 2025

Bachelor of Computer Science

Relevant Coursework: Operating Systems, Real-Time Programming and Computer Graphics

EXPERIENCE

Verily

May 2024 - Aug 2024

Software Engineer Intern

- Automating developer metrics collection using **ProtoBufs**, **Google BigQuery** and **Golang**.

Vivid Seats

Sep 2023 - Dec 2023

Software Engineer Intern

- Improved Google web vitals scores on over **65,000** pages by identifying and resolving unexpected layout shifts on vividseats.com using **Next.js** and **TypeScript**.
- Increased Gross Order Value (GOV) by over **\$3 million** by converting location-based suggestions to render server-side using Next.js.
- Reviewed and implemented unit tests using **Jest** and **React Testing Library**, increasing test coverage by **1%**.

Cynorix

Jan 2023 - Apr 2023

Software Developer Intern

- Cut development time for 2FA file decryption by **20%** by extracting stateless business logic from **React.js** components.
- Increased customer conversion by **over 5%** by improving the reliability of saved payment tokens recieved by the **Stripe API**.
- Integrated single sign-on into Cynorix's filesharing product using **Google Auth API**.

Lambdus

Sep 2021 - Aug 2022

Software Engineer and Co-founder

- Architected a web app using **Next.js**, **Express.js**, and **MongoDB** to make animating more accessible to individual animators.
- Containerized application using **Docker**, enforcing consistent deployment behaviour across different environments.
- Pitched idea to a panel of venture capitalists and judges with varying technical backgrounds at the **semi-finals** of Velocity \$5k pitch competition.

PROJECTS

Research Assistant Working on light transport algorithms under Prof. Toshiya Hachisuka

Fluid Simulation 🌀 Navier-Stokes fluid simulation that is numerically stable using **JavaScript**.

Ray Tracing Implemented a renderer from scratch based on ReSTIR paper using **Rust**.

Path Tracing 🌀 Created a small path-tracer using Metal GPU compute shaders and **C++**.