

Zachary Mayhew

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ABOUT

Software Engineer with skills in a variety of Computer Science problems, hoping to learn and apply my knowledge to solving interesting software problems.

EDUCATION

[Purdue University](#) — Computer Science B.S. and Chinese Studies B.A. Aug 2021-May 2024, GPA 3.45

SKILLS

Languages

- Rust
- C/C++
- Java
- Kotlin
- Scala
- OCaml
- JavaScript, TypeScript
- C#
- Python

Tools

- Git
- Linux
- Makefiles
- Shell scripting
- Perforce
- Gradle
- SQL and NoSQL databases
- Docker

Platforms

- OpenGL
 - React.js
 - Android
 - Firebase
- ### Other
- Agile/Scrum environments
 - Jira
 - GitHub Actions

EXPERIENCE

Software Engineer, [SEP](#) — Jun 2024-Present

Software Engineering Intern, [Xperi Corporation](#) — May 2022-Dec 2023

- Upgraded legacy build tools using [Android NDK](#) with [Haxe/Lime](#)
- Optimized compile time using [Haxe](#) build tools in a company local fork of the compiler and build tools (~400% compile time improvement)
- Contributed to an internal fork of [Google ExoPlayer](#) and the public ExoPlayer repository
- Fixed bugs caused by ARM SIMD optimizations on Android TV
- Worked on an internal fork of the Chromium cronet network stack as a backend for collecting video streaming analytics in ExoPlayer

Web Developer and Tutor, [TechLab Education](#) — Jun 2018-Jul 2020

- Converted existing web platform from a custom Google Cloud backend to [TypeScript](#) running on [Firebase](#) with Hosting, Functions and Firestore
- Maintained the company website, enrollment system, sign up system and [Stripe](#) based payment system
- Taught classes on Python and Java

PROJECTS

rust - github.com/rust-lang/rust

Contributed to the compiler and standard library

pbrtrs - github.com/zacklukem/pbrtrs

Physically based ray tracer based on the book [Physically Based Rendering: From Theory To Implementation](#)

xlang - github.com/zacklukem/xlang

Simple statically-typed imperative programming language with algebraic datatypes, type inference and basic generics that compiles into C

paint_renderer - github.com/zacklukem/paint_renderer

Final Project for CS 334 - Introduction to Computer Graphics. Original experiment with non-photorealistic rendering using particle based paint strokes