Ryan Berger

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EXPERIENCE

Sr. Wooly, SLC, UT (Remote) — *Lead Backend Engineer*

MAY 2019 - CURRENT

Worked on a REST API written in Go, administered a Postgres database, and built out Terraform for all Google Cloud infrastructure . Managed implementing new features, and managed a small team of frontend and ops engineers.

University of Utah, SLC, UT — *Undergraduate Researcher*

August 2021 - MAY 2022

Worked under John Regehr to build an ARM to Alive2 lifter that formally verifies the lowering of LLVM IR to ARM assembly. Submitted a Thesis about my lifting work to the University of Utah.

VidAngel, Provo, UT — *Lead Android Developer*

NOVEMBER 2017 - SEPTEMBER 2018

Used Kotlin, Android Architecture Components, and MVVM to clean up a monolithic Android codebase written in Java to make it testable. Contributed to internal tooling and the product's REST API.

EDUCATION

University of Utah, Salt Lake City, UT — *Computer Science*

AUGUST 2018 - May 2022

Bachelor of Computer Science with a minor in Mathematics. Focus on systems and programming languages.

PROJECTS

ARM TV

ARM TV is an ARM to LLVM lifter that leverages Alive2 to formally verify backend code generation. To date, it has found over 10 miscompilations in LLVM and continues to be a valuable tool to the ARM backend developers.

JPL Compiler

JPL (John, Pavel Lang) is a toy programming language created by John Regehr and Pavel Pachekha built for array manipulation, mainly image processing. It features a NASM and LLVM backend, with a minimal runtime for PNG manipulation.

SKILLS

Building HTTP, and GRPC APIs with Golang, Postgres, and Redis.

Compilers, developer automation, tooling, and operations.

LANGUAGES

Golang, C++, Python, Kotlin, and Java