Ashton Wiersdorf

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EDUCATION

University of Utah
PhD in Computer Science

Started 2022
Salt Lake City, Utah

– Focus: Programming languages and type systems

Brigham Young University
B.S. in Computer Science, Math minor

2017–2022
Provo, Utah

– Cumulative GPA: 3.76/4.0

EXPERIENCE

Spiff Inc.
Software Engineer

May 2021–August 2022
Sandy, Utah

– Built, maintained, and extended an interpreter for a language tailored to processing financial calculations
– Implemented a type inference system emphasizing comprehensible error messages

TazWorks (now MeridianLink)
Software Engineer Intern

January 2020–April 2021
Draper, Utah

– Eliminated daily-manifesting bugs in the company's core product
– Ported legacy Ruby code base to Elixir to improve reliability and response times

20 Billion Neurons GmbH
Software Engineer Intern

September–December 2019
Berlin, Germany

– Adapted a Golang project to be more robust under unstable network conditions
– Dockerized AI application; built Travis CI script to automatically build and push images

Student Life Technology at BYU
Programmer

December 2016–April 2019
Provo, Utah

– Stabilized decades-old legacy systems and introduced automated build strategies
– Introduced version control to office; GitLab now used to manage all projects

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LEADERSHIP AND TEACHING

Instructor and Mentor
Spiff Inc.

May 2021–August 2022
Sandy, Utah

– Mentored coworkers interested in learning how to program
– Delivered weekly instructions on various topics related to software development

English Instructor
Impact Exchanges

June–July 2017
China

– Planned and delivered English lessons to grade-school children for six weeks

Full-time Volunteer
The Church of Jesus Christ of Latter-day Saints

2014–2016
Germany

– Learned to speak fluent German and taught myself conversational Chinese
– Gave weekly instruction and training to other volunteers
– Organized service projects and training meetings involving volunteers across Germany

PROJECTS

See a full list of projects on my personal site and related sites such as GitHub and SourceHut.

Type inference with errors   SourceHut
Type inference for a small lambda calculus with decent error messages

μKanren   SourceHut
Walkthrough of the μKanren embedded logic language

lambda-x86   GitHub
My first compiler, which compiles a small Lisp to x86

RESEARCH

Flux Research Group   2022
Worked with Eric Eide on building a new DSL for building xApps in O-RAN enabled 5G base stations

Undergraduate Research at BYU   2021
Worked with Kimball Germane on novel control-flow analysis techniques

PRESENTATIONS

Informal

- Macros with Elixir   2019

LANGUAGES

- **English** Native language
- **German** Fluent, CEFR level: C1–C2

SCHOLARSHIPS AND AWARDS

- Departmental Fellowship   2023
- Academic scholarship for half tuition   2017–2019
- Runner-up, Utah Sterling Scholar   2014
- 1st place, Utah State Science Fair   2013