Ashton Wiersdorf

https://lambdaland.org/ GitHub: ashton314
ashton.wiersdorf@pobox.com LinkedIn: ashton-wiersdorf

EDUCATION

University of Utah Started 2022
PhD in Computer Science Salt Lake City, Utah

- Focus: Programming languages and type systems

Brigham Young University 2017–2022
B.S. in Computer Science, Math minor Provo, Utah

- Cumulative GPA: 3.76/4.0

EXPERIENCE

Spiff Inc. May 2021–August 2022
Software Engineer 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) January 2020–April 2021
Software Engineer Intern 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 September–December 2019
Software Engineer Intern 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 December 2016–April 2019
Programmer 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 May 2021–August 2022
Spiff Inc. Sandy, Utah

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

English Instructor June–July 2017
Impact Exchanges China

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

Full-time Volunteer 2014–2016
The Church of Jesus Christ of Latter-day Saints 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