

Benjamin F. Wilson

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Summary

Recent MS and BS graduate in Computer Science from Oregon State University, and former Head Software Engineer at Axolsoft in California. Specializing in full-stack, front-end, and server-side engineering. Passionate about building systems that help others learn, discover information, and just generally make people smile. Background in biology and mechanical engineering. Interested in applications related to data visualization, tools for data analysis, and programming language design and development.

Skills

- **Proficient:** HTML5, CSS, Javascript, Haskell, C++, C, Bash, RegEx, full-stack & front-end engineering, testing, CI
- **Familiar:** Python, Typescript, Lua, GLSL, Java, MySQL, x86 Assembly, Obj-C, networking, ML, general biology
- **Technologies:** NGINX, AWS, OpenGL, React, Node.js, Git/Github, Unix, Windows, Android, iOS, \LaTeX

Experience

Research Assistant, Programming Languages Group, Oregon State University 2020 - 2021

- Worked under **Prof. Martin Erwig** to research **classification and ordering systems** for educational programming examples
- **Designed technique for classifying programs** into teachable partial-orderings via graphs, using syntactic categories
- **Co-wrote the programming language BoGL** in Haskell, and engineered the BoGL stack with Haskell/NGINX/React on AWS
- **Led development on the research group website** in Hugo, BoGL documentation/tutorials using Jekyll, and BoGL interpreters

Teaching Assistant, Oregon State University Sept. 2018 - June 2020

- **Taught students in introductory Computer Science** 160/162 courses to teach concepts through C++ & Haskell
- **Ran labs** with students, graded assignments, provided office hours, and **volunteered to run after-hours study sessions**
- **Helped guide evolution of the introductory CS courses** with fellow TAs and instructors over many terms

Core Contributor, Parse Community on Github Jan. 2017 – June 2018

- **Oversaw the Parse PHP SDK** (akin to Firebase), performed code reviews, and lead testing & development
- **Improved the SDK** through $\geq 90\%$ test coverage, style enforcement, integrated Travis CI, and auto-generated documentation
- Performed **code reviews** and **worked with developers from across the world**

Head Software Engineer, Axolsoft, Upland CA Jan. 2015 - Sept. 2017

- **Co-founded Axolsoft LLC** and built full-stack, front-end, Android and iOS applications
- Built & managed **CMS, e-commerce, and email marketing systems** in PHP/SQL for private and government clients
- **Contributed patches on Github** to the Braintree PHP and Parse PHP SDKs, both being used at Axolsoft

Web and Mobile Development, Contract 2013 - 2017

- Developed and maintained the **online portal and website** for Score Savers SAT Prep in southern California
- Engineered Score Savers **Android and iOS applications**, using the Parse BaaS (akin to Firebase)

Education

M.S. - Computer Science, Oregon State University (OSU), Corvallis OR, 3.91 GPA 2020 - 2021

- Thesis: *Structuring Teachable Knowledge through Program-Concept Classifications*

B.S. - Computer Science, OSU, Corvallis OR, *Cum Laude*, 3.59 GPA 2018 - 2020

Mechanical Engineering, OSU, Corvallis, OR 2011 - 2012

San Marin HS, Novato, CA 2011