TYLER A. YOUNG

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Work Experience

SENIOR SOFTWARE DEVELOPER   December 2021 – Present
Felt Maps, Inc.   Remote
- Contributed to the full stack (Elixir + Phoenix, TypeScript + React) of our real-time, collaborative mapmaking tool
- Used observability tools to improve the reliability of the app, especially our Phoenix Channels communication (see my ElixirConf 2022 presentation)
- Regularly executed large-scale, zero-downtime database migrations of tens of millions of rows
- Diagnosed and fixed performance and scaling problems on the backend

SOFTWARE TEAM LEAD   June 2021 – December 2021
Generac Grid Services   Remote
- Managed a team of 7 delivering features & fixes to large energy utility customers
- Contributed to our Elixir backend, using OTP features like process isolation, supervision trees, error recovery, & more
- Contributed to our Elm-based web frontend, communicating with the back-end via GraphQL
- Overhauled CI setup for better developer feedback and a 30% reduction in test times
- Improved scalability & performance through both BEAM and Postgres optimizations

LEAD APPLICATION DEVELOPER   June 2020 – August 2021
Unbound Photo Browser for Mac   Self-Employed
- Rescued the app after years of neglect by the previous developer, fixing dozens of crashing bugs & delivering much-requested new features, leading to a 50% increase in the Mac App Store's average rating in 6 months
- Began transitioning the legacy Objective-C & AppKit codebase to Swift (and SwiftUI, where appropriate)
- Overhauled marketing to improve user perception & better explain unique selling proposition

SENIOR SOFTWARE ENGINEER   May 2014 – February 2021
Laminar Research   Remote
- Designed & implemented both the C++ client & Elixir server for X-Plane's massive multiplayer network, capable of supporting 10,000+ simultaneous players in a single shared world (Elixir-Lang.org case study)
- Reimagined the user experience for the X-Plane 11 release: in addition to a sleek new look, I overhauled the UI to be heavily visual and entirely interactive, where before it was static, text-based, and unintuitive
- Created an automated testing suite for X-Plane Desktop, and deployed a continuous integration cluster
- Developed GIS algorithms for building global scenery for X-Plane Mobile

WEB DEVELOPMENT CONSULTANT   January 2013 – April 2014
Conversion Insights, Inc.   Self-Employed

Open Source

- Contributed Enum.slide/3 for the Elixir 1.13 standard library
- Open-sourced Elixir implementation of the RakNet protocol for reliable UDP networking
- Fixed a memory leak in the Bloom filter used in DuckDuckGo's iOS app

Writing & Presentations

- Rebuilding the Plane While It's Still Flying: Large-Scale, Zero-Downtime Migrations Without Fear (ElixirConf '23)
- Delightful Multiplayer Editing with Phoenix (ElixirConf '22)
- Designing GenServers for Testability (ElixirConf '21)
- Wrote why I chose Elixir for X-Plane's massive multiplayer game server

Education

TRUMAN STATE UNIVERSITY   Graduation Date: May 2013
B.S. in Computer Science, minor in Mathematics   Cumulative GPA: 3.9