

10+ years of experience building large, complex mobile and/or web products in specialized, small teams. I value pragmatism, accountability, creativity, and continuous learning.

## Experience

### OpenCraft

*Devops + Fullstack Engineer*

**Remote (Berlin)**

*2019 Mar - 2020 June*

- › Deployed customized instances of the Open edX platform for various universities and startups
- › Used Ansible playbooks for configuration of servers - monitoring (Prometheus exporters for MySQL, MongoDB, HAProxy etc), service discovery (Consul), log shipping (Filebeat), backups, etc
- › Debugged service failures using Kibana to filter through logs output by our infrastructure, and Grafana to query and visualize metrics collected and stored by Prometheus
- › Developed core features of LabXChange, an online learning platform, using Python + Django, and Typescript + React + Jest + Puppeteer
- › Helped improve the GitLab CI/CD Pipeline for LabXChange, which deployed to separate Kubernetes clusters for each environment
- › Improved end-to-end testing automation for LabXchange to prevent non-deterministic failures
- › Participated in routine infrastructure maintenance - replacing an HAProxy load balancer, for example
- › Contributed to Django-based tool for provisioning customized Open edX instances on OpenStack VMs
- › Helped with assessing overall sustainability of our team (hours committed to client budgets vs available people hours, against internal projects)

Ansible   AWS   Terraform   Kubernetes   Docker   OpenStack   Prometheus   Grafana   Consul  
ELK   HAProxy   nginx   Postgres   Python   Django   TypeScript   React   Puppeteer

### Otherworld

*Senior iOS Engineer*

**Remote (San Francisco)**

*2018 Jun - 2019 Jan*

- › Improved project maintainability by identifying tech debt and creating roadmaps for refactors
- › Reduced compile times from 5 minutes to 45 seconds by modularizing the codebase and implementing dependency injection
- › Implemented features related to image processing of camera / video content, navigation, feed, media presentation, messaging, deep linking, analytics
- › Worked closely with the project manager to improve our process, tools, and techniques related to sprint planning, task breakdown, and project tracking
- › Coordinated with server engineers to design APIs and model schemas for new features

Swift   iOS   Python

### UNSTATIC Tech

*Senior 3D Developer*

**Remote (London)**

*2017 Jun - 2018 Jun*

- › Developed C++ applications that generate data for architectural lighting control
- › Designed software architecture for the C++ side of the platform, established patterns and refactored to improve maintainability and readability
- › Developed generative algorithms and computer graphics routines used to feed data to lamps and LED walls
- › Developed GUI with React + Redux, embedded into the C++ app with Chromium Embedded Framework
- › Worked with lighting designers to execute visual concepts for specific customer needs

- › Developed various microservices to clean and transform data from disparate sources (such as public transportation, weather, company internal data) that the C++ apps could use conveniently
- › Developed web interface for customers to control visuals generated on the C++ side
- › Deployed applications to Linux-based servers which controlled lights on skyscrapers
- › Migrated C++ codebase to CMake to ease cross-platform build process

C++ OpenGL Javascript React Redux GLSL WebGL NodeJS Linux

## Mentally Friendly

Senior Software Engineer

London, UK

2015 Sept - 2016 Aug

- › Played a key role in making technical decisions around application architecture, tooling, and workflow for various projects
- › Encouraged knowledge transfer and opened up communication across platform-specific developers by proposing programming paradigms, design patterns, generic abstractions, and testing practices which are useful regardless of platform
- › Developed several native mobile products, with a couple of projects in React Native, and one in C++
- › Deployed servers to transform data when APIs deviated too far from what mobile client needed
- › Was actively involved in product UI/UX design discussions

iOS Swift Objective-C React Native NodeJS OpenFrameworks C++

## Carbon Five

Software Engineer

San Francisco, CA

2014 Feb - 2014 Dec

- › Developed much of the core architecture and flagship features for Thumbtack's 2 iOS applications
- › Used Behavior-driven development practices. Unit tests, functional tests, and UI tests covered a large percentage of the codebase.
- › Ensured Continuous Integration server (TeamCity) ran tests across all device versions and for both iOS 7 and 8 to prevent device-specific bugs
- › Developed on the server side in Python + Pyramid when the project was bottlenecked by the server-side backlog
- › Played a key role in making technical decisions around application architecture, tooling, and workflow
- › Was actively involved in design discussions both from a technical application architecture standpoint, and a product UI/UX standpoint
- › Taught experienced developers coming from a web background how to be productive on iOS, explaining the idioms and tools
- › Participated in code reviews, merged pull requests

Objective-C iOS Python

## CrowdCompass

Software Engineer

Portland, Oregon

2012 May - 2013 Sept

- › Developed core features of the iOS client - image and geo maps, theming, data synchronization, notifications, photo gallery, custom URL routing, ORM, database encryption, social sharing, etc.
- › Improved continuous integration environment (Jenkins), automated complex build processes which included building custom encrypted databases, pre-seeded with data from the backend, baked-in assets and themes
- › Improved release quality by automating integration testing of core features using calabash testing library + a mock server written in sinatra/ruby
- › Worked with backend, android, design, and devops teams to make important decisions about large refactors and architecture/software design
- › Participated in code reviews to share knowledge and gain feedback to improve code quality
- › Performance tuned iOS app to eliminate memory leaks
- › Tracked my time and gave estimates for feature implementations, worked with a ticketing system

Objective-C iOS Jenkins Bash Ruby Sinatra Passenger nginx

# Education

**Bachelor of Science, Information Technology (Networking specialization)**

2005 - 2009

**University of Arkansas, USA**

*GPA: 3.6 of 4.0*

# Tools & Technologies

<b>Infrastructure as Code</b>	Terraform, Kubernetes, Docker, Ansible
<b>Scripting / Productivity</b>	curl, jq, cut, ack, grep, wget, bash, emacs, tmux
<b>CI / CD</b>	Jenkins, TeamCity, GitLab
<b>Build tools</b>	GNU Make, CMake, Ninja
<b>Analysis</b>	Isof, strace, top, vmstat, iostat, free, iotop
<b>Logging</b>	ELK (Elasticsearch, Logstash, Kibana), Papertrail
<b>Reverse Proxy / Web</b>	nginx, Apache
<b>Load balancing</b>	HAProxy, ELB
<b>Cloud</b>	AWS, Digital Ocean, Vultr
<b>Virtualization</b>	KVM + QEMU, Virtualbox, Vagrant
<b>Linux distros</b>	Arch, Debian, Ubuntu, CentOS
<b>Languages</b>	Python, Javascript, C++, GLSL, Objective-C, Swift, C, Ruby, PHP, C#
<b>Database</b>	Postgres, MariaDB, SQLite, MongoDB, MS SQL Server
<b>Frontend</b>	React, Redux, Mocha, Jest, Puppeteer, Webpack
<b>Graphics</b>	WebGL, OpenGL, OpenFrameworks
<b>Backend</b>	Django, Flask, Express, Sinatra
<b>Mobile</b>	iOS, React Native
<b>Project Management</b>	Jira, Pivotal Tracker

# Personal Projects

Available upon request.

# Interests

rock climbing   digital art   generative design   mathematics   computer graphics   architecture  
computational linguistics   physics   computer vision   general-purpose GPU   travel   cycling ...