gr4yscale@gmail.com
linkedin.com/in/gr4yscale
github.com/gr4yscale

Tyler Powers

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

Otherworld — **San Francisco (Remote)**
Senior iOS Engineer — *2017 Jun - 2018 Jun*

- Improved project maintainability by identifying tech debt and creating roadmaps for refactors
- Implemented features related to image processing of camera / video content, navigation, feed, media presentation, messaging, deep linking, analytics
- Reduced compile times from 5 minutes to 45 seconds by modularizing the codebase and implementing dependency injection
- 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 for new features

Swift | iOS | Python

UNSTATIC Tech — **London (Remote)**
Senior 3D Developer — *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 servers in nodejs to clean and transform data from disperate sources (such as public transporation) 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 — **London, UK**
Senior Software Engineer — *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
- Managed time and focus effectively as work on various projects started and stopped, depending on which client was priority at any given time
- Was actively involved in product UI/UX design discussions

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

Carbon Five **San Francisco, CA**
Software Engineer *2014 Feb - 2014 Dec*

- Developed much of the core architecture and flagship features for Thumbtack's 2 iOS applications
- Taught experienced developers coming from a web background how to be productive on iOS, explaining the idioms and tools
- As the team grew (about 8 iOS devs, 4 server devs), I played a key role in making technical decisions around application architecture, tooling, and workflow, helping to keep our team as a whole productive and making it easier to bring new developers on board
- Was actively involved in design discussions both from a technical application architecture standpoint, and a product UI/UX standpoint
- Participated in code reviews, merged pull requests
- Established application architecture and design patterns as an early developer for C5's client, Thumbtack
- Used Behavior-driven development practices. Unit tests, functional tests, and UI tests covered a large percentage of the codebase.
- Developed on the server side in Python + Pyramid when the project was bottlenecked by the server-side backlog
- Ensured Continuous Integration server (TeamCity) ran tests across all device versions and for both iOS 7 and 8 to prevent device-specific bugs

Objective-C | iOS | Python

CrowdCompass **Portland, Oregon**
Software Engineer *2012 May - 2013 Sept*

- Developed the iOS client with 3 other iOS engineers, working with the backend, dev ops, android, and design teams.
- Learned to work as a group to make important decisions about large refactors and architecture/software design
- Participated in code reviews to share knowledge and gain feedback about how to produce more quality code
- Implemented or improved many of the core features that define the application today, including image and geo maps, theming, data synchronization, notifications, photo gallery, custom URL routing, ORM, database encryption, REST API's, social sharing, etc.
- Improved release quality by automating integration testing of core features using calabash testing library + a mock server written in sinatra/ruby running on nginx/phusion passenger
- Helped maintain and improve continuous integration environment (Jenkins) and automate complex build processes
- Learned how to track my time and give estimates for feature implementations, working with a ticketing system
- Learned how to performance tune iOS applications and watch out for memory leaks with Instruments
- Became more proficient with many developer tools including git, vim, zsh, bash, and various unix utilities

Objective-C | iOS | Ruby

Education

Bachelor of Science, Information Technology *2005 - 2009*
University of Arkansas
GPA: 3.6 of 4.0

Technical Skills

Languages	Javascript, Objective-C, Swift, C++, GLSL, C, Python, Ruby, PHP, C#
Frontend	React, Redux, WebGL, Three.js
Mobile	iOS, React Native
Backend	Express, Flask, Sinatra, Symphony
Desktop	OpenGL, OpenFrameworks, .NET, Cocoa
Containers	Docker, Kubernetes
Databases	Postgres, MySQL, SQLite, MongoDB, MS SQL Server
CI	Jenkins, TravisCI, TeamCity
GNU/Linux	bash, git, emacs, KVM/QEMU, nginx, apache
Build Tools	GNU Make, CMake, Gradle, Ninja, Webpack, Babel

Personal Projects

SucculentVJ *2015 Jul - present*

Live, interactive tool for audio-visual performance

- Generative geometry creation, object placement, scaling, and rotation creates unique scenes
- Post-processing effects chain
- MIDI control with a custom map for AP40 MIDI controller hardware
- Node-based signal chain for parameter control

Three.js | GLSL | React | Redux | Web Midi

https://github.com/gr4yscale/succulent

GPU Particle System *2016 Oct - 2016 Jan*

Realtime interactive particle simulation

- Implemented a particle simulation on the GPU using GLSL / OpenGL and pingpong textures technique
- Presets system to load / store parameters affecting global foreces, emitters, particle lifecycle, attractors / repellers, color, post-processing
- Post-processing effects chain
- Websocket-based control of presets system

C++ | OpenGL | GPGPU | Simulation

Havit *2015 Dec - 2016 Aug*

Sophisticted link-sharing workflows and archival

- Aims to solve the problem of scrolling through endless pages of messages to find a link that someone sent you
- Share to one place, for multple platforms
- Playful user interface with realtime image processing over UI elements themselves (using RN components to wrap OpenGL ES)
- Integrations with most popular messaging, bookmarking, and read it later services

React Native | Redux | GLSL | OpenGL ES | Node

https://github.com/gr4yscale/havit

Interests

rock climbing | digital art | generative design | mathematics | architecture | linguistics | physics | film | computer graphics | computer vision | image processing | machine learning | computational genomics | natural language processing | distributed systems | parallel algorithms | general-purpose GPU ...