

SOFTWARE ENGINEER

JONATHAN TROWBRIDGE

EDUCATION

B.S. COMPUTER SCIENCE | VIRGINIA COMMONWEALTH UNIVERSITY '13

QUALIFICATIONS

| | |
|------------------------|---|
| Languages: | C#, Kotlin, Java, TypeScript, JavaScript, T-SQL, PL/SQL, HTML5/CSS3 |
| Frameworks: | ASP.NET, ASP.NET Core, Xamarin, Angular, React |
| Platforms: | Android, iOS, Windows, Linux, Web |
| Databases: | Microsoft SQL Server, PostgreSQL, MongoDB |
| Source Control: | Git, Subversion |
| IDEs: | Visual Studio, Android Studio, Xcode, Rider, WebStorm, Vim |
| Certifications: | Microsoft Xamarin Certified Developer |

WORK HISTORY

SOFTWARE ENGINEER | MAPLETON HILL MEDIA | BOULDER, CO | AUG. '16 – FEB. '18

- Developed complex iOS and Android mobile applications using Microsoft Xamarin framework.
- Implemented multifaceted ASP.NET Web APIs to back mobile applications and synchronize data between devices.
- Worked as part of a small, four-person team, to develop the Aspen Snowmass cross-platform mobile application.
- Developed various types of applications, including, but not limited to: skiing, agriculture, inventory, and shipping.

APPLICATION DEVELOPER | WORLDVIEW SOLUTIONS | RICHMOND, VA | FEB. '13 – FEB. '16

- Created a Watershed Pollution Management module for the Virginia Department of Environmental Quality using Backbone, Marionette, and ASP.NET Web API.
- Developed a resource conservation management planning module for the Best Management Practice Tracking application utilized by the Virginia Department of Conservation and Recreation
- Implemented a complex claims-based authentication workflow that is utilized within the Storm Water Construction General Permitting application for the Virginia Department of Environmental Quality
- Created a claims-based user management web portal for a recruiting application utilized by the Air Force.
- Worked as part of a team to develop a land and water resource planning software called Practice Keeper
- Migrated a non-profit website used to promote exercise in K-12 students from jQuery to Dojo

SOFTWARE DEVELOPER | GALLIUM TECHNOLOGIES | RICHMOND, VA | APR. '12 – FEB '13

- Developed, documented, and deployed features into an existing MVC web application
- Updated legacy components for compliance with current web standards
- Maintained and administered a PostgreSQL database

ADMINISTRATIVE ASSISTANT | MARFAIR JOINT VENTURE | D.C. | MAY '11 – AUG '11

- Invoiced tenants and helped with updating tenant records
- Property and account management

QUALITY ASSURANCE INTERN | PREMATIC INC. | VIENNA, VA | JUL. '08 – DEC. '08

- Developed unit tests using Perl and the Selenium browser automation framework
- Managed, updated, and added customized Python plugins for Trac bug tracking system

SIDE PROJECTS**BIT CAST | ANDROID APP**

- Follows recommended Android architecture by utilizing Android Jetpack Architecture Components
- Media playback powered by a custom wrapper of the VLC libVLC library
- Implements anonymous crash reporting and analytics
- Uses Kotlin coroutines for asynchronous operations
- Query for torrents within the app
- Play media locally or cast it to Chromecast devices
- Begin video playback before media finishes downloading
- Support for all magnet links and .torrent files
- Query for and apply subtitles of multiple languages in the local media player

SIMPLE BARCODE SCANNER (WIP) | ANDROID APP

- A barcode scanner powered by ML (machine learning) Kit by Google
- Primary goal of the project was to learn about Google AdMob integration
- Uses Material Design Components by Google
- Free and paid version (not currently on Play Store)

SIMPLE VLC PLAYER | ANDROID LIBRARY

- Significantly expands the types of media that can be played on Chromecast devices
- Provides custom local media player and Chromecast controller
- Manages media playback service for consumers of the library to keep streams alive
- Integrates the Open Subtitles API to support subtitles in multiple languages and encodings
- Powered by libVLC and written in Kotlin and Java

SIMPLE TORRENT ANDROID | ANDROID LIBRARY

- Supports sequential downloading of torrent pieces to help facilitate streaming
- Can download torrents via magnet URIs or .torrent files
- Written in Kotlin and powered by frostwire-jlibtorrent

FFMPEG GLIDE VIDEO DECODER | ANDROID LIBRARY

- A Glide resource decoder powered by FFmpegMediaMetadataRetriever

- Expands support for extracting thumbnail images from media types not supported by Android

THE PIRATE BAY SEARCH ANDROID | ANDROID LIBRARY

- A simple library for simultaneously querying The Pirate Bay and its various proxies
- Library utilizes Kotlin coroutines to parallelize web requests to ensure fast, accurate results

OPEN SUBTITLES ANDROID | ANDROID LIBRARY

- An Android client library for the opensubtitles.org REST API
- Supports querying for and downloading of subtitles

REFERENCES

Jason Timbo – COO and Co-founder of Mapleton Hill Media

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Paul Sabini – COO and Co-founder of Mapleton Hill Media

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