MatthewRubin

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Education:

Georgia Institute of Technology – BS in Computational Media *2010-2013*

- C.M. mixed high level computer science classes with design classes
- 3.75 general GPA, >3.8 C.S. GPA
- Completed certificate programs in Business (Entrepreneurship) and Psychology

Work Experience:

Various amounts of time on odd-jobs, internships, and failed startups *2010-Present*

- Worked on a web marketplace that allowed college students to resell textbooks to other students at their school using the LAMP Stack (2011)
- Worked on a website (and its content) focused on teaching grade school teens through educational games with Unity Web Player (2013)
- Created a strong vertically complete web app for advertising and viewing campus events using JQuery Mobile and NodeJS (wrapped to mobile using a framework) for a school-wide Georgia Tech student competition (2013)

Undergraduate Research Ass. - Georgia Tech, Computer Animation Lab *2013*

- Worked on physics-driven animation simulations in C++
- Wrote significant 3D rendering code in OpenGL

Electronic Arts (Visceral) – Gameplay Engineer *2014-2015*

- Worked on Battlefield Hardline for 90% of product cycle
- Used C++ to complete tasks requiring high level knowledge of AI, Linear Algebra, Graphics, Physics, Networking, and UI
- Found and fixed many bugs from very large codebases, made increasingly difficult by architecture that was intensely server-client and event driven

Flareworks – Lead Engineer *2015-Present*

- Work on developing and maintaining a modular backend architecture in Node (with Restify)
- Develop and maintain frontend Android client using Java with Android SDK
- Develop and maintain frontend admin panel using Angular
- Make major architectural and pipeline decisions
- Heavily involved in UX and business ops

(Just a few) Independent Projects:

Jimmy John's Auto-order *2012*

- Created a python script that used Selenium to allow me to order my favorite sandwich from the Jimmy John's website by just running a single line of code

3D looking, 2D RTS *2013*

- Used Java with a 2D graphics library to write a 2D game that used forced perspective and various linear algebra algorithms to appear to be 3D
- Created a functional custom UI that would interpret mouse behaviors

Windows Phone Apps *2013*

- Used C# with XNA to create two simple windows apps
- Apps handled input, rendered correctly to the view, and ran simple logic
- Both apps are vertically complete but have room for improvement

Simple Game Engine *2013*

- Used C++, Win32 programming, high level linear algebra, and OpenGL to work on a simple game engine
- Wrote my own code to import models from Maya, correctly map the UV textures, render the textured models in a scene (using OpenGL), take inputs from users, and run simple behaviors on game objects, including moving along a terrain (to eliminate the dependency on physics)

News Discussion Website *2014*

- Site used a full MEAN Stack
- Complete user login and session management using PassportJS with a MongoStore, functionality for viewing, posting, editing, and deleting articles from an S3 store and Mongo database, and functional UI

Javascript Game for Mobile Web *2014-Present*

- Reverse dungeon crawler (you play the spirit of the dungeon and try to help the AI driven hero navigate obstacles to reach new floors)
- Using PixieJS to render for mobile web at acceptable speeds
- Pushing the limits of the platform by running a highly optimized game algorithm that utilizes several AI algorithms at high levels of frequency
- User can create maps, store and load them with an S3 server, and test maps (the hero will pathfind to the goal)

Social Inspiration Website *2014-Present*

- Full MEAN stack utilized, Passport for secure login and session management
- A medium for people to keep a journal of the things that inspire them (text and pictures) and choose what to view and share
- Almost vertically complete but still a lot of content structure, design, and polish work to be done

Technical Proficiencies:

Application Programming

- Java (and Processing, also Android SDK), C++, C# (in conjunction with both XNA and Unity), C, Python

Web Programming

- HTML5, CSS, JavaScript (using libraries and frameworks such as JQuery, Angular, Ember, Express, Node, Passport, etc.), PHP, MySQL, PostgreSQL, MongoDB, AWS (especially S3)

Design Skills

- Adobe Photoshop/GIMP, Autodesk Maya, Unity Game Engine, Goal-Oriented UI/UX

General Skills

- AI, Graphics programming in OpenGL and DirectX, Win32, Advanced calculus and linear algebra, Physics, Network programming

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