Ryann McQuilton

Los Angeles, CA • ryannmcq.github.io • linkedin.com/in/ryannmcquilton

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TECHNICAL EXPERIENCE

NationBuilder • Software Engineer   October 2018 - Present

Plinko.js • Software Engineer   June 2018 - September 2018
- Co-created a real-time, multiplayer physics game that may be played in browser using only JavaScript, requiring no special client-side plugins
- Built back-end server architecture with Node and front-end responsive lobby system with React
- Created a client-server network architecture that operates over the WebSocket protocol to synchronize application state across the internet to multiple clients in real time
- Designed a custom renderer to animate the game world at 60fps using HTML5 Canvas
- Simulated a lag-free, real-time user experience despite network latencies of 100-200ms
- Implemented client-side prediction algorithms to minimize data needs
- Optimized data transmission using quantization and binary serialization, which reduced bandwidth consumption by nearly 90%

    Plinko.js White Paper: http://plinkojs.com/about

Freelance • Full-Stack Web Developer   June 2016 - September 2018
- Developed web applications for personal and open-source projects
- Implemented test suites with Minitest, Jasmine, and Jest
- Built a Rails back-end API with a SQL database and a React/Redux front end to create Reaction, a clone of the popular Trello project management app
- Created Postit, a Reddit-like sharing app built on Rails and backed by PostgreSQL

OTHER EXPERIENCE

University of Southern California • Program Coordinator   February 2010 - May 2017
- Implemented an online application system for the Resident Honors Program to increase efficiency of a four-person team by 25%, reducing project time by two weeks per person
- Expanded the recruiting class of the Resident Honors Program by 228% over five years
- Streamlined advisory process to serve the same student population with one fewer FTE

SKILLS & TECHNOLOGY

Languages	Ruby, JavaScript ES5/ES6+, Node.js, SQL, HTML5, CSS
Frameworks	Rails, React, Redux, jQuery, Express, Sinatra
Other Tech	WebSockets, RESTful APIs, OOP, Postgres, Matter.js, Git

EDUCATION

Launch School • Remote
Full-Stack Web Development   2016-2018

University of Southern California • Los Angeles, CA
Master of Professional Writing, GPA 4.0   2014
Bachelor of Arts, Communication, Magna Cum Laude   2009