Andrew Hassan

Software Guru and Product Visionary

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SKILLS

- Great product vision, task management, and leadership skills developed through my product manager role at blueRover
- Outstanding software engineering skills gained through design and development of full-stack projects from scratch such as blueRover's SafeFood application
- Excellent communication and teamwork skills developed from working in agile development teams of various sizes
- Strong analytical and problem-solving skills obtained through development, maintenance, and debugging of various software projects

TECHNICAL PROFICIENCY

Programming Languages: JavaScript, Ruby, Hack/PHP, C#, Python, Java, C, C++

Software Technologies: Node.js, React.js, SASS/SCSS, RabbitMQ, MySQL, Redis, socket.io, d3.js, Ruby on Rails

Design Technologies: Sketch, Photoshop, Illustrator, Balsamiq

WORK EXPERIENCE

Technical Product Manager, *blueRover* — *May 2015 - present*

- Engineered a scalable system for the flagship product which uses a Node.js micro-service architecture to process real-time sensor data, analytics, and serve a real-time web app; ensuring system uptime and providing fault-tolerance
- Designed and implemented front-end UX/UI for web applications using modern design guidelines with Sketch and React
- Developed and managed product direction alongside the business developer for blueRover's flagship product to ensure a successful product launch and rapid user uptake

Front-End Engineering Intern, *Facebook* — *September - December 2014*

- Designed and implemented a full-stack system in Hack and React to efficiently support bulk imports of ad configurations into Power Editor, allowing large clients to manage thousands of ads at once
- Assisted in migration of legacy Power Editor code to React

Product Lead, *blueRover* — *January - May 2014*

- Designed and developed a full-stack web application using Node.js to collect and dynamically process remote sensor data in real-time
- Built a multiplexing library on top of socket.io to minimize WebSocket connections
- Created all graphics and UI elements and implemented my design using modern web technologies such as snap.svg and d3.js

Software Engineering Intern, *Vidyard* — *January - May 2014*

- Implemented a JavaScript API so that clients can interact with both Flash and HTML5
- Optimized page loading speeds by eliminating 20% of unneccessary CSS and configuring Rails's Asset Pipeline
- Full stack web development using Ruby on Rails and backbone.js for new features

Software Engineering Intern, *blueRover* *May - August 2013*

- Created a best-guess algorithm to solve the NP-hard problem of optimizing the cost of operating SIM cards
- Developed a query language that takes user queries to collect and aggregate data using the blueRover Web API

Software Developer, *Desire2Learn* *September - December 2012*

- Utilized D2L's proprietary framework and .NET libraries to develop a web interface and back-end to allow clients to upload grades in bulk
- Used web development tools such as Fiddler to test, debug, and improve the performance of the file processor

EDUCATION

Bachelor of Applied Science, *University of Waterloo* *April 2015*
Honours Computer Engineering

Relevent Educational Experiences:

- *Computer Networks:* Learned about and implemented low-level networking concepts such as packet routing
- *Cooperative and Adaptive Algorithms:* Learned about and utilized various adaptive algorithms to generate optimal, or close to optimal, solutions for NP-hard problems

PERSONAL PROJECTS

Github: www.github.com/andrewhassan

EasyCDN, *peer-to-peer CDN* *April 2016 - present*

- EasyCDN allows users to use peer-to-peer WebRTC connections in modern web browsers to download CDN files from each other, with a fallback to the real CDN
- Advantages of this over traditional CDNs are alleviated bandwidth costs for CDN providers and faster downloads for users

Featherweight, *lightweight ORM for Node.js* *February 2016 - present*

- Featherweight allows developers to build SQL-like queries programmatically
- Maps database results to plain JavaScript objects
- Advantage over most Node.js ORMs is that they are typically heavy and generate convoluted SQL, whereas Featherweight is quick to map and generates SQL based exactly on what the programmer wants

Notifyr, smartphone smart-case *February 2016 - present*

- Notifyr is a smart-case that can show the time and notifications on an integrated eInk screen to reduce battery usage on your phone

Raspberry Pi Router, a Wi-Fi router built from a Raspberry Pi *June 2013*

- Used a Raspberry Pi to create a wireless router using a USB Wi-Fi stick and standard network tools such as iptables or hostapd

Wikiwalk, a Wikipedia visualization tool *March 2013*

- Wikiwalk lets users choose a Wikipedia article and view the relationships between that article and the other articles on Wikipedia