Zachary R. Broderick

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Education

BS Computer Science	**MS Computer Science**
Brandeis University	**Worcester Polytechnic Institute**
December 2008 – Waltham, MA	May 2011 – Worcester, MA

Professional Experience

Backend Software Engineer   March 2013 – Present
The Tap Lab   Cambridge, MA

- Led effort to automate backend infrastructure using Chef, enabling rapid scaling in response to launch traffic and ensuring uptime and performance.
- Refactored critical backend code paths (Ruby on Rails), ensuring data integrity, increasing performance and hardening against exploitation. Wrote entire suite of unit tests for existing components.
- Developed administrative panel for automation of common tasks and analysis of game state, saving considerable QA time and allowing for more rapid diagnosis and response to issues.
- Researched, designed and implemented a vector-based map tile system on top of Open Street Map data to replace a deprecated service critical to the functioning of the game.

Software Engineer   December 2011 – April 2013
Shareaholic Inc   Cambridge, MA

- Designed and implemented job framework to process gigabytes of daily log files with Elastic MapReduce and Hadoop Streaming using Ruby and outputting the results to Riak, providing the data backend for several products including publisher analytics and recommendations.
- Designed and implemented a Rails application providing APIs for publisher analytics and recommendations, including a library for extracting thumbnails from web pages.
- Developed and maintained an internal dashboard that recorded, charted, and displayed critical business metrics and monitored their progress over time.

Software Development Engineer in Test   May 2011 – November 2011
Microsoft Corporation   Cambridge, MA

- Maintained and enhanced test infrastructure in C#/.NET for App-V SE team.

Senior Developer / Project Manager   January 2009 – April 2011
ASSISTments Project – Worcester Polytechnic Institute   Worcester, MA

- Designed and implemented a feature allowing parents to monitor students' performance using detailed reports, scheduled emails, and a messaging subsystem for communication with teachers in Ruby on Rails.
- Automated the essay critiquing process in response to teacher feedback by engineering a dynamic UI in Javascript and Prototype, significantly reducing the time and difficulty required to run the activity in the classroom.