Boyang Niu

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Education

University of Pennsylvania, Philadelphia, PA

- B.S.E. and M.S.E. in Computer Science with minor in Entrepreneurship, May 2015
- Cumulative GPA 3.73; Major GPA 3.81
- Relevant Coursework: Software Engineering, Relational Databases, Discrete Math, Data Structures & Algorithms, Computer Architecture, Engineering Entrepreneurship, Complexity and Automata, Computer Organization and Design, Java & OCaml, Linear Algebra, Calculus III, Probability

Work Experience

Software Development Intern, Ooyala (May 2013—August 2013)

- Worked on the Ops & Infrastructure team to modify and bring up an open source tool, MAAS, which automated the booting up and distribution of physical servers in a data center.
- Closely associated with and helped data services by optimizing the process of reimaging and rebooting Cassandra servers.
- Updated the base image and installer by increasing modularity and merging builds for EC2 AMIs and baremetal images into one tool.
- Worked closely with developers at Canonical to contribute changes upstream an into the open-source community. Extended MAAS to work with custom images and added the ability to upload kernels to the server through UI.

Teaching Assistant, CIS 196 (January 2013—June 2013)

- Held office hours weekly to give advice and help with homework assignments.
- Reviewed and graded assignments for a Ruby on Rails class of 40 students, as well as a final webapp project of their choice. Focused on style, test-driven development, and Rails conventions.

Software Developer, Apprennet LLC (Sept. 2012—Feb. 2013)

- NSF-funded startup providing an educational platform for MOOCs and video exchange capabilities.
- Used Ruby on Rails to set up an internal GitLab and incorporated Chef to automate configuration of servers and auto-scaling of web applications.
- Implemented in-browser video capture ability and real-time activity steam to boost user participation.

Software Development Intern, CareerBuilder (May 2012—August 2012)

- Developed an enhanced web crawler as a service to aggregate postings on job sites using Ruby on Rails and deploying onto Amazon EC2 servers.
- Migrated original local databases to use a more efficient cloud-based system using Amazon S3 and Amazon Simple DB.
- Re-factored large legacy codebase in Visual Basic to process job application forms more efficiently and with less memory consumption.

Projects

Mealmapper, a food suggestion app using a set of data from the Yelp API (March 2013—May 2013)

- Built on top of a Rails framework using AJAX API calls to populate a map with a set of matching restaurants.
- Pathing algorithm determines the highest quality food on a trip given start and end points.
- Uses natural language processing in Python to grade different foods on a restaurant's menu based on word inflection in review context.

Safelet.us, a hackathon project for locating high price-to-safety sublets around universities (Sept. 14-16 2012)

- Implemented a web crawler in Ruby to scrape data from Craigslist and SpotCrime.
- Visualized a density map and graphed occurrence of crimes in an area using Javascript, then plotted available subleases using Google Maps API to track danger levels.

WordCraft, a 3D Flash and Android game developed using the Unity Engine (March 2012—April 2012)

- Scripted in Javascript and C#, features include a full dictionary search and multiple powerups.
- Multiple play modes, including a level system, tutorial, and endless. Released on Kongregate as of April 2012.

Technical Experience

Programming Languages and Frameworks

- Ruby, Python, Java, Scala, C++, C#, Rails, Django, Play | HTML, CSS, JavaScript, jQuery

Other Technology and Tools

- AWS including S3, RDS, EC2, and SimpleDB, Hadoop, Cassandra, Spark, Git, Agile Scrum, Kanban

Extracurricular and Other Experience

- *First Violinist,* University of Pennsylvania Symphony Orchestra — 2011-2012
- Open-source contributor to Ubuntu MAAS and other Canonical projects, — 2013-present