Juan Bautista Berretta
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Github: https://github.com/JuanbiB
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Education:

Oberlin College, Oberlin, OH — Bachelor of Arts Candidate 2018
Major: Computer Science

Relevant Courses Taken

- Introduction to Computer Science, Data Structure, Systems Programming, Programming Abstractions, Calculus, Discrete Math, Game Design, Computer Architecture, Computer and Information Security, Machine Learning and Data Mining, Computer Networks, Algorithms

Skills

- Python, Java, C, C#, C++
- HTML, CSS, Bootstrap
- Git, Emacs, Linux, MacOS, Windows, Data Structures

Work Experience

Software Engineer Intern at Google
Sunnyvale, CA May – August 2017

- Performed improvements to a large-scale system testing framework used by the storage teams in Technical Infrastructure (Bigtable, Spanner, Colossus) to enhance usability and debuggability.
- Extended the current global logging framework to provide a more centralized and controlled workflow.
- Implemented a testing template that allows developers to perform an arbitrary amount of operations per second on the system under test.
- Decreased time between development iterations by speeding up test initialization by a margin of ~60%.

Engineering Practicum Intern at Google
Mountain View, CA May – August 2016

- Re-wrote backend server for a network statistics dashboard, resulting in a 5x speedup.
- Fixed various bugs and implemented several new features for the dashboard.
- Designed, implemented and launched a new machine troubleshooting aid, that gathered information from two dozen systems and presented the results in a single central location, improving productivity.
- Added support for new networking protocols to a multi-node traffic generator used for performance testing.
- Contributed over 2500 lines of code to the Google codebase.

Software Developer for Oberlin Environmental Studies Department
Oberlin, OH February – February 2016 – December 2016

- Part of a team responsible for the maintenance and development of the Oberlin Environmental Dashboard, an interactive online system put in place to 'Educate, Motivate, Empower!"
- Framework built mostly on ReactJS, but also used jQuery, Node.js, HTML and CSS.
- Goals include raising awareness of the usage of resources around the city of Oberlin by monitoring these in real time and putting them on display.
- http://environmentaldashboard.org/

Software Projects

DNS Cache Poisoning Simulation

Oberlin, OH – December 2016

- Discussed, planned and implemented a DNS cache poisoning simulation alongside two other students as part of the final project for Computer Security (CS 364).
- Written in Java.
- https://github.com/JuanbiB/DNS-Cache-Poisoning

Machine Learning for Optimal In-Game Performance

Oberlin, OH – November 2016

- Planned, implemented and trained a Q-Learning algorithm to provide the most optimal succession of abilities a player should perform to maximize their combat performance in the MMORPG, World of Warcraft.
- Final project for Machine Learning and Data Mining (CS 374).
- Written in Python.
- https://github.com/JuanbiB/Rotation-Optimization-WoW

Exca-Mage

Oberlin, OH – May 2016

- 2D game built using the Unity engine for 361 Game Design course along with three other team members.
- Responsible for game mechanics, implemented mainly using the Unity physics engine.
- Over 7k lines of code contributed, written in C#.
- https://github.com/JuanbiB/ExcaMage

Awards

DIS Award of Academic Excellence in Computer Science

Languages

- Fluent in English, Spanish and Portuguese