# Patrick Cockwell

# 4B Software Engineering | 20349613

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I am a University of Waterloo software engineering student interested in large data set analysis and visualization with experience in user acquisition and monetization of current users. I am looking to learn more on these topics and improve my design and development skills. I am familiar with, and excited about the startup/small company scene and hope to one day make my mark.

## SKILLS AND QUALIFICATIONS

## Languages

- **PHP**: Over 4 years of experience obtained working on projects including Orion, AuToDo, RoomClerk, and various analytics dashboards
- SQL: Over 5 years of experience gained working on a wide range of tools and tasks
- **Python**: Over 3 years of usage and experimentation for scripts and applications within the workplace and on personal tasks
- Lua: Approximately 12 months of usage and experience while working on Heroes of Newerth Artificial Intelligence Bots
- Java & C/C++: Approximately 12 months of experience gained while working on school related projects and assignments
- Very experienced with HTML, CSS, Javascript

#### Tools and Software

- Well versed with the Vertica Analytics Platform as a result of analytics work in prior internships
- Expert with MySQL and strong familiarity with PostgreSQL through work with multiple different forms of applications
- Familiar with several Amazon Web Services tools including Redshift, and S3
- · Comfortable with Unix command line
- Experienced with multiple version-control systems including Git and SVN
- Frameworks/Toolkits: Codelgniter, Django, Laravel, Kata (PHP), jQuery, Twitter Bootstrap, Pylons
- Editing Tools: vim, Textmate, Sublime, Notepad++, PHPStorm
- Operating Systems: Linux, Mac, Windows

## Other Skills

- Have resided in Velocity, an exclusive residence incubator focused on entrepreneurship and technology for 4 terms
- · Comfortable working in team environments and very experienced working on small teams
- Passionate about computer programming, gaming, web development, and large data visualization and management
- · Currently interested in the field of machine learning
- Fully bilingual, and fluent in English and French

### RELEVANT PROJECTS

## Orion Analytics Project Real Time Data Graphing

#### October 2011 - Present

- Determined specifications, designed, and helped to build a real time graphing tool for my workplace
- Built version 1 of a real-time data visualization tool using PHP, jQuery, AJAX, and interactions with Graphite, a real time time-series data aggregator
- Revamped the project using CodeIgniter and Bootstrap along with the help of coworkers, and eventually open-sourced (see below for link) the project during a returning internship
- Currently working to keep the system up to date, and provide feature upgrades
- Project currently has 10+ forks on GitHub and has been implemented and used at other companies

## Heroes of Newerth Al Bots Artificial Intelligence Bots

## February 2013 - February 2014

- Developed the Soul Reaper Al bot that was approved, and included in the retail game
- Member of the Al Bot Team, a group of community members that discuss, review, and approve other community bots before they are sent to S2 Games for final approval and inclusion in the game
- Developed multiple algorithms that have been integrated as general behaviors for all bots

### WORK EXPERIENCE

# Hearsay Social Inc. Software Engineer

July 2014 - Present

- Designing and developing a Data Warehouse product, including Extract-Transform-Load process, using S3, Redshift, and custom Python code
- Working to parallelize extraction and transformation of data to improve speed and efficiency
- Incorporating heavy data security constraints imposed by clients and business model

#### S2 Games Inc.

## Web Development Intern

**July 2013 - December 2013** 

- Designed and built the functionality for the website to accompany S2 Games' newly released title. Strife, which reached over 15,000 unique visitors per month in its first few months
- Built a forum system from the ground up alongside a small team
- Various web development tasks while working remote
- Built an Artificial Intelligence bot that was added to Heroes of Newerth, S2 Games' other major title

# **GREE International Inc./Funzio Inc.**

## **Analytics Engineering Intern**

May 2012 - August 2012

- Developed multiple analytical display dashboards from the ground up for the Analytics Engineering Team
- Helped design analytics databases for games in development
- Revamped and worked towards open-sourcing the Orion Analytics Project (mentioned above)

#### Funzio Inc.

## **Analytics Engineering Intern**

## September 2011 - December 2011

- Designed a crucial data dashboard for executives that helped monitor daily activities
- Helped manage the flow of data through the analytics platform to ensure a stable system
- Accomplished many tasks spanning from Python script work to iOS development

## **EDUCATION**

# University Of Waterloo 4B Software Engineering

## September 2009 - Present

• On track to graduate in January 2015 with a Bachelor of Software Engineering (BSE)

 Received a total of 2 years of workplace experience through the University of Waterloo Coop Program

## ADDITIONAL INFORMATION

Github: https://github.com/pcockwell/

Orion Analytics: <a href="https://github.com/gree/Orion">https://github.com/gree/Orion</a>

Strife Website: http://www.strife.com

Heroes of Newerth Al Bots: https://github.com/s2games/Heroes-of-Newerth-Bots