

# 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.

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## 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: **CodeIgniter**, **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
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## **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 AI Bots**

#### **Artificial Intelligence Bots**

**February 2013 - February 2014**

- Developed the Soul Reaper AI bot that was approved, and included in the retail game
  - Member of the AI 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
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## **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
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## **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 Co-op Program
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## **ADDITIONAL INFORMATION**

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

Orion Analytics: <https://github.com/gree/Orion>

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

Heroes of Newerth AI Bots: <https://github.com/s2games/Heroes-of-Newerth-Bots>