

# Marcus McCurdy

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## Summary

*Engineer at heart who has always loved seeing the joy building something useful can bring to others*

I don't really know how to summarize 30 years of life and over a decade of work experience with a few meager sentences, but here we go. I'm a passionate

and pragmatic programmer who believes done is better than perfect while at the same time believing that software shouldn't be rushed. I enjoy writing correct code while maintaining a sense of urgency and momentum. I use testing to provide myself with a tight feedback loop and freedom to refactor without fear.

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## Experience

### 500nRed

PHILADELPHIA, PENNSYLVANIA

#### Lead Software Engineer

Sept'12 – Present

- Lead developer on 500nRed's cross-browser JavaScript extension platform. A Python Flask web app backed by a MySQL database and SQLAlchemy ORM. The Flask app is served by Unicorn and proxied by NGINX.
- Worked closely with operational analysts to provide custom reporting on 50's internal PHP dashboard and MySQL database.
- Updated a manual process of editing JavaScript in text fields and transformed it into a single page AngularJS application providing a simple interface for creating ad units that are compiled into fully functioning JavaScript ad units.
- Revolutionised 50's Python web scraping framework by rewriting a synchronous process into an asynchronous job queue with RQ.
- Major contributor to 50's Java and Jetty based popup serving daemon processing billions of requests daily.
- Implemented a concurrent Java application to process and aggregate terabytes of Akamai log files daily and store them in a PostgreSQL database.
- Extensive Amazon AWS deployments and provisioning with Ansible.

### Drexel University

PHILADELPHIA, PENNSYLVANIA

#### Research Engineer

Apr'09 – Sept'12

- Performed background research and drafted a proposal for an internal R&D online learning project focusing on integrating artificial intelligence into Drexel's online courses. Proposal after research was approximately \$700,000 under initial estimates and was presented to the president of the university.
- Technical lead on a US Army funded Android development project. Assessing the feasibility of and implementing agent based networking applications. Also created scenarios for testing and evaluation of networking protocols and performed the evaluations.
- Team lead in the design and implementation of a distributed collaborative battle command planning system for the US army. Oversaw and mentored junior developers during the project while working closely with the lead system integrator to deliver a premium product. Integrated the final product with systems from French and German allies. Extensive use of Swing and NASA's World Wind.
- Designed and implemented an HTTP proxy in C# for a biometrics fingerprint scanner and webserver. The proxy was for both the client application of the fingerprint scanner and the webserver for matching and enrolling biometrics data. The proxy enables the client and server to use an in house pure C content based networking middleware.

### NSWC PHD

PORT HUENEME, CALIFORNIA

#### Combat System Engineer

Jul'07 – Apr'09

- Responsible for installation and configuration of remote assistance systems on US Navy cruisers and destroyers. Remote system saved time and money by allowing shore based experts to provide remote support to sailors both at sea and when docked. Resulted in a dramatic cost savings and decreased the turn around time for repairs.
- Communicated directly with System Test Officer (STO) to ensure minimal or no down time while installing routers and software for remote support.

- One of the first agents when Best Buy acquired Geeksquad.
  - Pioneered and assisted in the roll-out of processes and procedures to the entire company.
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## Education

Drexel University  
**Masters degree in Computer Science**  
Focused on Artificial Intelligence.

PHILADELPHIA, PENNSYLVANIA  
2009 – 2012

California State University at Long Beach  
**Bachelors degree in Computer Engineering**  
Minor in Computer Science.

LONG BEACH, CALIFORNIA  
2001 – 2007

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## Skills

**Technical specialties:** I have a passion for programming and often program just for fun. I've written the most code in Python, Java, PHP, and JavaScript. While Python is currently my favorite I try to remain language agnostic and thoroughly enjoy learning new languages and I've dabbled in Go and Ruby. I've also worked with both C and C++ including embedded programming in C on the 8051 microcontroller. Experience with web technologies HTML, CSS, and LESS. Extensive experience with XML and JAXB. Written the most SQL for both MySQL and PostgreSQL and deployed both databases to AWS and DigitalOcean. Linux system administration (mostly Ubuntu) on AWS and my own personal machine. I use Git and Mercurial daily. I currently use IntelliJ as my IDE, but have used Visual Studio for C# and C++ development. I have also used Netbeans and Eclipse for Java development. My editor of choice is Vim despite attempts to coerce me into using Emacs.

**Natural languages:** English (*native*), German (limited).

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## Interests

**Non-exhaustive and in alphabetical order:** Biking, cooking, Crossfit, gaming, hiking, Olympic lifting, programming, reading, running