Nicholas Dayton Graham

cell: 858.291.0878 email: nickdgraham@gmail.com

mail: 1359 Rose Avenue, Los Angeles, CA 90291

Engineering and Technical Experience

Web Application Development **Current**

- Utilized Google App Engine (GAE) to create a wiki featuring: proper obscurity of information via HTTP usage; user accounts with passwords hashed with sha256 + salt for security; session management via hashed cookies; efficient usage of Memcached to limit reads to GAE NoSQL Datastore; a public API providing wiki content in XML and JSON; integration with Google Maps service. Utilized GAE webapp2 framework, which does not abstract away HTTP, and Jinja2 template engine for Python.

Software Engineer, Directv, El Segundo, CA **April 2012 – October 2014**

- Maintained Java middleware component of set-top box software stack, requiring debugging from UI layer, through the middleware to the JNI. Coded in Eclipse on Linux and tested on local and remote hardware.

- Prototyped a rudimentary continuous integration loop for my team by configuring a Jenkins server to periodically execute a Java application to interact with JIRA RESTful API, parse the JSON responses, download and merge the appropriate reviewed patches, and start a build.

- Responsible for coding of emergency roll-back builds, needed to prevent recordings and other settings being erased due to deltas in the metadata (serialized Java objects) between major software versions. Oversaw QA department's verification of these emergency builds.

- Developed a property-file based conditional compilation method, which became the standard for the Latin America middleware group for reducing image size and making source code more readable.

- Reviewed patches submitted by offshore teams.

Software Engineer, HCL and Xerox Corporation, El Segundo, CA **June 2011 – April 2012**

- Member of team that utilized Agile, Lean, and SCRUM methodology for designing and developing networking and system security solutions for high volume production printers. Managed and tracked daily burndowns and deliverables.

- Formulated high level designs from customer use case description and produced high quality software for Solaris in C++ and Java with unit and automated system-level tests.

- Improved and developed new software user interfaces with Swing and Visio.

- Became the subject matter expert of the network filing library that supports file transfers across FTP, SFTP, and SMB protocols.

Software Engineering Intern, Xerox Corporation, El Segundo, CA **June 2008 – June 2009**

- Participated in design and modeling sessions, iteration reviews, and code reviews.

- Resolved bugs in various legacy code components, including the network filing library and the job saving module.

- Researched automated testing framework developed by another Xerox group for application to my team's deliverables.

Technical Skills

Languages: *Java, C++, Shell Scripting, Python, PHP, ML, HTML, CSS*; **Operating Systems**: *Linux, Mac, Windows*; **Version Control**: *GIT, Mercurial, Accurev, ClearCase*; **IDE**: *Eclipse*; **Bug Tracking:** *JIRA*; **Databases:** *MySQL, Google App Engine Datastore*; **Web App Dev:** *Google App Engine webapp2 framework, GAE Datastore, Jinja2 template engine, Python, HTTP, Cookies, Memcached*

Education

B.S. Computer Science, University of California at Los Angeles **2005 – 2011**

- Implemeted a B+ tree for efficient insertion and retrieval of blocks from the underlying custom file system.

- Built a reliable data transfer protocol similar to TCP's congestion control atop UDP that recovered from packet corruption and loss.

- Completed five translators for Compiler Construction class that take a Java-subset program through four intermediate representations and output the equivalent MIPS 32 bit assembly program. Extensively utilized the visitor design pattern.

- Crafted a 2D text-graphics computer game called Dungeons with many object-oriented features requiring the use of inheritance, polymorphism, and artificial intelligence.

- Created a website bookmark manager using PHP, MySQL, and Apache.

- Developed a relationship estimator in Java for Computational Genetics class that simulates a population's DNA and identifies relatives through statistical analysis of single nucleotide polymorphisms.