

## **Kit Petrie**

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### **Summary of Qualifications:**

- 9 years experience in software design for engineering, financial, and video game industries.
- Development of back end systems for high volume public facing websites.
- Lead Developer on Multiple iOS and Android apps including NASA's Award winning Earth Now.
- Proven leadership skills in both technical and non-technical settings.

### **Programming Skill Set (Years Used):**

- Languages: Java 4, C++ 3, Objective-C 2, JavaScript 2, C#(3), SQL/PHP/Lisp/Perl/Bash 1.
- IDEs/Tools: Mono 3, Eclipse 2, Xcode 4, Visual Studio 2, Subversion 4, Git 3.
- Platforms: linux, iOS, Android, LAMP, .Net 4, Windows XP/7, Nintendo DS.

### **Professional Experience:**

- ***Sr. Mobile Software Engineer*** **NASA JPL** **Jun 2013-Present**  
Lead developer for Webby award winning app Earth Now (<https://eyes.nasa.gov/mobile-apps.html>). Earth Now is a data driven science visualization app with over 1 million combined iOS and Android downloads. Developed in Unity3D and C# to use a single codebase for iOS and Android development. Key features include data caching and performance tuning, push notifications, geo located images, orbit calculations from TLEs and a smooth and intuitive user interface.

Team software engineer for Eyes on the Exoplanets and Eyes on the Earth (<http://eyes.nasa.gov/>). Improved performance (fps) by 125% and increased the data capacity from 2000 to 20,000 stars for a data driven visualization of the exoplanets. Full stack work including python pipeline hacking, C# game logic for Unity3D, writing custom GLSL shaders for performance tweaking and JavaScript UI development for a SXSW digital interactive award finalist.

- ***Software Engineering Intern*** **ScoreBig.com** **July-Dec 2012**  
Developed internal tools that reduced customer service turnaround time from 4-5 hours to 4-5 minutes and reduced customer service related support requests by 90%. Database design, MVC architecture. Experience with test driven design, Agile, Scrum, continuous deployment and SAAS. (.NET 4.0, C#, JavaScript, jQuery, Git, MS Visual Studio, MS SQL Server 2008)
- ***Software Engineer/iOS Developer*** **Floor 84 Studio** **2008-2009**  
Developer for two titles for the hand held Nintendo DS (C++/OOP/UML). Lead and team developer for eight iPhone games/apps. Programmed 2D animation, maintained web content, programmed game logic and performed mobile application performance tuning. Ported 4 iPhone apps to Android 2.3 (iOS SDK, XCode, Java, Android SDK, Eclipse)
- ***Embedded Firmware Developer*** **Tri-M Engineering** **2003-2005**  
Software design and implementation for embedded controller in water purification system with web interface. Testing and implementation for custom hardware. (Java, C++, Embedded System, OOP)
- ***Web Programming Instructor*** **Sprott Shaw College** **2002-2003**  
Courses taught : HTML, Server administration and Security, Project Management, Web Marketing and Graphic Design (HTML, JavaScript, Java, linux)

- **Software Engineer** **BPTrade Canada** **1999-2002**  
Team developer for web based stock trading software. Web UI implementation for high traffic web site. Back end logic and SQL programming. Client/Server sockets development. Internal and external training, client and sales team troubleshooting. (C++, Java, HTML, SQL, CSS, Javascript, OOP, UML)

## **Education:**

**BSc. Computer Science from California State Polytechnic University, Pomona CA. 2009-2013**

- Graduation date: June 15<sup>th</sup> 2013.
- Awarded Boeing Center for Information Assurance Cyber-Security Scholarship 2011.
- Cal Poly Pomona GPA: 3.19. Core Computer Science GPA: 3.53.
- The following class projects and academic code samples can be found at: <http://kitpetrie.com/code.html>
  - Learn.java Uses machine learning to teach a program how to play the misere version of 123 nim.
  - Puzzle.java uses heuristics to find the shortest solution to an 8 piece slider puzzle.
  - Kth.java compares the time/complexity of four sorting algorithms to find the Kth sorted element.
  - RSA.java implements the RSA encryption algorithm.
  - Expense Tracking System. This is a PHP/MySQL app for employee expense tracking.

References available upon request.

Linked In Profile with references available at:  
<http://www.linkedin.com/pub/kit-petrie/25/294/8a3>