Matthew McKay

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Education

2010 – 2014   **Bachelor of Science in Computer Science (Minor in Mathematics)**, *Carnegie Mellon University (Class of 2014)*, Pittsburgh, PA, *GPA: 3.97/4.0.*

2006 – 2010   **High School Diploma**, *Poolesville High School Science, Math, & Computer Science Magnet Program*, Poolesville, MD, *GPA: 3.88/4.0, Weighted: 4.75/5.0.*

Experience

Fall 2013 – Spring 2014   **Research/Senior Thesis**, *Carnegie Mellon University*, Pittsburgh, PA.
- Worked on a methodology for verifying the correctness of a compiler phase by using a shared language to allow for compiled code to be verified against its source code

Summer 2013   **Software Engineering Intern**, *Shopkick*, Redwood City, CA.
- Implemented mcommerce features to allow purchases in both Android and iOS apps
- Implemented server support for mcommerce, including pulling down transaction information and processing it

Fall 2012 – Spring 2013   **Research/Independent Study**, *Carnegie Mellon University*, Pittsburgh, PA.
- Implemented a static verification checker for the language C0 using Z3 theorem prover
- Checks for array index out-of-bounds accesses, null-pointer dereference, arithmetic errors (like division by zero) by using knowledge from loop invariants and contracts

Summer 2012   **Software Engineering Intern**, *Google*, Mountain View, CA.
- Implemented advanced search features in the YouTube Video Manager, and worked on adding customization to the new Dashboard

Fall 2011 – Spring 2012   **Teaching Assistant for Principles of Functional Programming**, *Carnegie Mellon University*, Pittsburgh, PA.
- Helped teach and guide students through learning functional programming with SML
- Taught recitations, wrote homeworks, held office hours, graded papers

Skills

Languages   SML, Python, C, Java, Javascript   **Software**   Vim, Git, Linux

Activities & Honors

Phi Beta Kappa   Inducted as a member into the Phi Beta Kappa Honor Society in 2014

Greylock Hackfest 2012   Worked in a group to develop τ (which was in the top ten projects), a webapp for students to submit code and view and respond to comments from teachers for instant feedback

Game Creation Society   Programmer of games, participated in multiple projects, including **Lucid** in Fall 2010 and project **101 Ways to Die** in Spring 2011