Matthew McKay

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Education

2010–present	**Bachelor of Science in Computer Science (Minor in Mathematics)**, *Carnegie Mellon University (Class of 2014)*, Pittsburgh, PA, *GPA: 3.97/4.0* (Dean's List).
2006–2010	**High School Diploma**, *Poolesville High School*, Poolesville, MD, *GPA: 3.88/4.0, Weighted GPA: 4.75/5.0*.

Experience

Summer 2013 — Software Engineering Intern, *Shopkick*, Redwood City, CA.
- Implemented mcommerce features to allow purchases in both the 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 the Z3 theorem prover
- Checks for array index out-of-bounds accesses, null-pointer dereference, arithmetic errors (like division by zero) by making use of knowledge from loop invariants and contracts

Summer 2012 — Software Engineering Intern, *Google*, Mountain View, CA.
- Worked on the YouTube Video Management Team
- Implemented advanced search features in the Video Manager, and worked on improvements 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

Summer 2009 — Student Research Intern, *University of Maryland*, College Park, MD.
- Developed a Java program that used Monte Carlo methods to play Bridge
- Used the program to experiment with a new method of averaging in the implementation of Monte Carlo methods to see how it impacted the program's performance in Bridge

Skills

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

Activities

Greylock Hackfest 2012	Worked in a group to develop τ (which made it into 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 project **Lucid** in Fall 2010 and project **101 Ways to Die** in Spring 2011