Matthew McKay

Carnegie Mellon University SMC 5655
Pittsburgh, PA 15289
✆ *301-244-9523*
✉ *mjmckay@andrew.cmu.edu*
⌂ *matthewjmckay.com*

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

Fall 2013 – Present
Research/Senior Thesis, *Carnegie Mellon University*, Pittsburgh, PA.
- Working on a correctness-checking compiler that uses a shared language between phases 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 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.
- Implemented advanced search features in the YouTube 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

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 three projects since 2010 **Lucid** in Fall 2010 and project **101 Ways to Die** in Spring 2011