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# 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.

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## 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

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## Skills

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

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## Activities

- Greylock Hackfest 2012 Worked in a group to develop  $\tau$  (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