

Matthew McKay

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Experience

- 2014 – Present **Software Development Engineer II**, *Amazon.com, Inc.*, Seattle, WA.
- Supply Chain Optimization Technology, Topology Team - Developed a full-stack AWS service for running high level optimization models of Amazon's shipping network
 - Consumer Engagement, Sonar Team - Worked on the systems used for rendering and sending the millions of daily customer email notifications from Amazon
- 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 M-commerce 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

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.*

Skills

Languages	Java, Python, SML, C, Javascript	AWS Services	DynamoDB, S3, Lambda, ECS,
Software	Git, Linux, Vim, IntelliJ		CloudFormation, API Gateway