Zachary Halle

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EDUCATION

CARNEGIE MELLON UNIVERSITY

BS in Computer Science
Expected May 2017 |
Pittsburgh, PA
School of Computer Science
Minor in Mathematics
GPA: 3.11 / 4.0

CLARKSTOWN HS NORTH

Grad. June 2013 | New City, NY

LINKS

Github: **zachhalle**
Personal: **zachhalle.github.io**
Blog: **zachhalle.github.io/blog**
Email: **zhalle@cmu.edu**

COURSEWORK

- Algorithm Design and Analysis,
- Compiler Design,
- Computer Systems,
- Foundations of Programming Languages,
- Parallel Data Structures and Algorithms,
- Functional Programming,
- Great Theoretical Ideas in Computer Science,

SKILLS

LANGUAGES

Java • Python • Haskell
Scala • OCaml • C# • Rust
C++ • JScript .NET • x86
LLVM IR • LaTeX • C
JavaScript • F# • Lisp

APPLICATIONS

Git • Subversion • GDB
ZSH • Sublime Text • Eclipse
Perforce • TeXMaker

EXPERIENCE

SOFTWARE ENGINEERING INTERNSHIP | Google

May 2016 - Aug 2016 | Mountain View, CA

- Worked as a server-side engineer for Google Maps.
- Implemented content-categorized image search feature for Maps. If a user searches for a restaurant, for example, then Maps will automatically decide to look for pictures of that restaurant's food and menu to show to the user.
- Created debugging interface to which allowed developers to fire requests and view the responses against our server interface. This greatly improved development velocity for our team.

HCI RESEARCH | Carnegie Mellon University

May 2015 - Aug 2015 | Pittsburgh, PA

- Rewrote self-teaching SimStudent app from ground up for increased modularity and efficiency
- Wrote tool to convert behavior graphs with unordered cliques into totally ordered graphs so that they would be compatible with SimStudent learning application

SENIOR TEACHING ASSISTANT | Carnegie Mellon University

15-150: Functional Programming
Aug 2014 – May 2015 | Pittsburgh, PA

- Led lab section where students practice concepts learned in lecture
- Held office hours where students sought help with course material
- Contributed to writing homeworks, lab handouts, and exam questions

SOFTWARE ENGINEERING INTERNSHIP | Perceptronics Solutions Inc.

Jun 2014 - Aug 2014 | Washington DC

- Rewrote backend data structures for new Influence Diagram editor application Adonis
- Implemented data serialization using JAXB library with custom serialization techniques

PROJECTS

SAFER C Summer 2015

Safer C is a compiler for a variant of C that guarantees that you never leak memory and never access it after freed, all at compile time, and without the overhead of garbage collection.

IVORY Summer 2014

Ivory is a complete chess application with custom GUI and AI implemented using the Alpha-Beta pruning algorithm augmented with various improvements. The source code is in Scala.

SUBMARINE ATTACK Summer 2011

Worked as part of a team at CMU HSGA to make arcade style 3D submarine game. Designed and implemented features of the heads-up display including radar.