Zachary Halle

http://zachhalle.github.io/
zhalle@cmu.edu | 845.548.8434

EDUCATION

CARNEGIE MELLON UNIVERSITY
BS in Computer Science
Expected May 2017 |
Pittsburgh, PA
School of Computer Science
Minor in Mathematics
GPA: 3.10 / 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[1],
- Compiler Design[1],
- Computer Systems,
- Parallel Data Structures and Algorithms,
- Functional Programming,
- Great Theoretical Ideas in Computer Science,

1: taking in Fall 2015

SKILLS

LANGUAGES
Expert
Java • C • OCaml • Scala
Python • SML
Proficient
C# • Rust • C++ • JScript .NET
Assembly • LLVM IR • LaTeX
Familiar
MySQL • Haskell • JavaScript
F# • Lisp

APPLICATIONS
Git • Subversion • GDB
Sublime Text • Eclipse
TeXMaker • MySQL Workbench

EXPERIENCE

HCI RESEARCH | Carnegie Mellon University
May 2015 - Aug 2015 | Pittsburgh, PA
- Rewrote self-teaching SimStudent app from groundup 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.
- Wrote persistence service feature to connect to MySQL database programmatically using JDBC driver, allowing us to read and write Java objects to and from a text database

PROJECTS

MESA Summer 2015
Ongoing project. A just-in-time compiled programming language implemented in Rust, targetting LLVM, based on the Kaleidoscope language.

ELEFANT Summer 2015
Ongoing project. Elefant never forgets! Tell Elefant to keep track of your sensitive files and directories and it will automatically maintain their n most recent copies at configurable intervals.

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
Created at CMU High School Game Academy. Worked as part of a team to make arcade style 3D submarine game in Unity 3D. Designed and implemented features of the heads-up display including radar in JScript .NET.