# Leah Hanson

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## TECHNICAL EXPERIENCE

**Participant, Recurse Center**     New York City     **Aug 2016 – Nov 2016**

| | |
|---|---|
| Participated in a 12 week self-directed programming workshop | |
| Solved Project Rosalind problems | Go |
| Explored details of the Haiku operating system | C++ |
| Paired on optimizing the performance of a Go game implementation | Python |
| Paired on understanding and parsing bplists | C |
| Implemented the Raft consensus algorithm | Julia |
| Worked through parts of a Statics and a Linear Algebra textbook | Math |
| And 2 more weeks to go! | |

**Software Engineer, Stripe**     Redmond, WA (remote)     **July 2015 – July 2016**

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|---|---|
| Refactored and updated legacy deployment infrastructure | Ruby |
| Wrote indexers for internal documentation search | Elastic Search, Ruby |

**Software Engineer, Google**     Madison, WI     **Feb 2014 – Feb 2015**

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|---|---|
| Made networks go fast | C++ |

**Research Assistant, Julia Language Project**     MIT     **May 2013 – Aug 2013**

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|---|---|
| Wrote TypeCheck.jl, a package for type-based static analysis of Julia code | Julia |
| Documented Julia webstack and interesting built-in APIs | Markdown |

**Participant, Recurse Center**     New York City     **Feb 2013 – May 2013**

| | |
|---|---|
| Participated in a 12 week self-directed programming workshop | |
| Built a Dropbox client for the Haiku operating system | C++, Python |
| Wrote a WebSockets implementation (WebSockets.jl) | Julia |
| Wrote a multi-threaded program and a tutorial about the features of Rust it used | Rust |

**Independent Study with Prof. Peter Froelich**     Johns Hopkins     **Sep 2012 – Dec 2012**

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| Wrote a course management web application | Haskell |
| Worked with HappStack, HSP templates, HDBC, and Twitter Bootstrap | Haskell, CSS |

**Intern, Jane Street Capital**     New York City     **Jun 2012 – Aug 2012**

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| Built internal tools: WebSockets server library, real-time charting library | OCaml, Javascript |
| Wrote an automated bot to compete in an internal trading tournament | OCaml |

**Research Project with Prof. Scott Smith**     Johns Hopkins     **Feb 2012 – May 2012**

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| Wrote an interpreter for an experimental language | Haskell |
| Wrote a lexer and parser using Parsec | Haskell |

**Intern, Fog Creek Software**     New York City     **May 2011 – Aug 2011**

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|---|---|
| Implemented new features for Kiln, including Image Diffs | C#, Python, Javascript |

**Statistical NLP Research Project with Prof. Mark Dredze**     Johns Hopkins     **Feb 2011 – May 2011**

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|---|---|
| Wrote scripts to convert text files to SVM light format using a bag of words model | Python, Bash |
| Wrote final paper describing methods and results | LaTex |

**Research Experience for Undergraduates**     Harvey Mudd     **May 2010 – Aug 2010**

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|---|---|
| Implemented heap analysis tools, including code to talk to a 3D graph visualization engine | Python, Ubigraph |

## EDUCATION

**M.S.E., Computer Science**     Johns Hopkins     **Sep 2011 – Dec 2013**

⋄ GPA: 3.54,    Project: Type-related Static Analysis for the Julia Programming Language

**B.S., Computer Science**     Johns Hopkins     **Sep 2008 – Dec 2012**

⋄ GPA: 3.46,    Dean's List 4 semesters

SPEAKING EXPERIENCE

**Inside Websockets**

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|---|---|---|
| Open Source Bridge (40min) | Portland | Jun 2016 |
| ACM Applicative (40min) | NYC | Jun 2016 |
| PolyConf (40 min) | Poznan, Poland | Jul 2015 |

**How Julia Goes Fast**

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|---|---|---|
| CodeMesh (45min) | London, England | Nov 2015 |
| YOW! (1 hour) | Australia | Dec 2014 |
| StrangeLoop (1 hour) | St. Louis | Sep 2014 |

**Intro to Julia Workshop**

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|---|---|---|
| Chicago Julia Meetup (4.5 hours) | Chicago | Nov 2014 |
| IceCube Lab (3 hours) | Madison | May 2014 |
| Chicago Julia Meetup (3 hours) | Chicago | Feb 2014 |
| Strata (3 hours) | New York City | Oct 2013 |
| StrangeLoop (3 hours) | St. Louis | Sep 2013 |
| LambdaJam (3 hours) | Chicago | Jul 2013 |
| Hacker School (3 hours) | New York City | Jun 2013 |
| Johns Hopkins University (3 hours) | Baltimore | May 2013 |
| Hacker School (2 hours) | New York City | May 2013 |

**Intermediate Julia Workshop**

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|---|---|---|
| Hacker School (2 hours) | New York City | Oct 2013 |

**More Julia Talks**

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| Contributing to Julia (8 min)   JuliaCon | Boston | Jun 2015 |
| TypeCheck.jl (35 min)   JuliaCon | Chicago | Jun 2014 |
| Intro to Julia (1 hour)   Asana | San Francisco | May 2013 |

WRITING EXPERIENCE

**Learning Julia (with Spencer Russell)**                                                          **Not Yet Published**
An introduction to Julia, focused on learning through examples of complete programs.

**500 Lines or Less: Static Analysis**                                                                  **October 2015**
http://aosabook.org/en/500L/static-analysis.html
A chapter introducing static analysis, using 500 lines of code from TypeCheck.jl.

**Learn Julia in Y Minutes**                                                                             **July 2013**
http://learnxinyminutes.com/docs/julia/
This is a brief introduction to Julia focusing on the syntax and a brief introduction to the type system.