Jacob H. Haven

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Objective

- An internship in Computer Security, Malware analysis, Cryptography, Penetration Testing, Systems programming/design, Programming languages, Embedded and Distributed systems, or Theory of Computation

- A complex system to study, understand and adapt

Experience

- **Stanford CURIS** Stanford, CA
  Undergraduate Researcher *June 2012 – September 2012*
  - Designed and implemented, using C++ and NTL, a highly optimized Lattice-based Fully Homomorphic cryptosystem based on [Brakerski12]

- **Space and Missile Systems Center — Engineering and Architecture** El Segundo, CA
  Software Engineering Intern *June 2011 – August 2011*
  - Researched Software Measurement standards; contributed to whitepaper on Software Security, Assurance and Reliability; created database to improve tracking of mission objectives; helped form workgroup studying possible benefits of Cloud Computing

- **WKU Math Department** Bowling Green, KY
  Undergraduate Researcher *August 2009 – January 2010*
  - Created optimized models of cellular automata in Mathematica, Java and C in order to study the algebraic structure of the abelian sandpile model; Detailed findings in a Mathematics research paper submitted to the Intel Science Talent Search

- **Hi-Tech Enterprises, Inc** Georgetown, KY
  Network Installation *July 2006*
  - Installed Local Area Networks in several Big-box retail stores

Education

- **Stanford University** Stanford, CA
  Computer Science *September 2010 – Present*
  - Courses: Computer and Network Security, Cryptography, Advanced Topics in Operating Systems, Programming Languages, Design and Analysis of Algorithms, Compilers (currently), Object Oriented System Design, Introduction to Databases, Computer Organization and Systems, Automata and Complexity Theory, Computability and Logic, C++ Programming, Probability for Computer Scientists, Modal Logic, Real Analysis, Modern Algebra II, Set Theory

- **Western Kentucky University** Bowling Green, KY
  Mathematics, Computer Science *August 2008 – May 2010*
  - Courses: Data Structures, Digital Systems, Graph Theory, Linear Algebra, Ruby, C, Complex Variables, Partial Differential Equations

Skills

Programming Languages

Experienced C, C++, Java, Python, Ruby, Bash/sh, Mathematica, LaTeX
Intermediate SQL, Rails, Haskell, Scheme, x86 Assembly, CoffeScript, Javascript, λ-calculus, MapReduce
Some exposure Clojure, PHP, Perl

Software and Protocols

Eclipse, SSL/TLS, Git, Mercurial, GCC, gdb, Valgrind, Unix shell (GNU coreutils, grep, vim), SSH and SFTP, VNC, VirtualBox, VMware, Wireshark, SharePoint, Microsoft Access, Multisim, Google App Engine, Amazon Web Services

Interests

Computer Security Malware Analysis, Secure System Design, Penetration testing

Theoretical Computer Science Automata Theory, Computability Theory, Programming Language Design

Mathematics Graph Theory, Set Theory, Abstract Algebra, Cryptography

Linguistics Phonology, Syntax, Computational Linguistics