Alexander Churchill

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Education

Stanford University: MS in Computer Science — **Stanford, CA**
Focus: Theoretical Computer Science — GPA: 4.0 — September 2011 – June 2012

Stanford University: BS in Computer Science — **Stanford, CA**
Focus: Artificial Intelligence and Machine Learning — GPA: 3.9 — September 2008 – June 2012

Programming Languages: Python, JavaScript/CoffeeScript, Java, C, C++, Objctive-C, HTML/HAML, CSS/LESS, Haskell, Matlab, Ruby on Rails

Stanford University: BS in Mathematics — **Stanford, CA**
Focus: Analysis, Probability and Measure Theory — GPA: 3.8 — September 2008 – June 2012

Courses Taken:
Object-oriented Programming, Machine Learning, Probabilistic Graphical Models, Convex Optimization, Natural Language Processing, Analysis, iPhone Programming, Computer and Network Security, Advanced Algorithms, Programming Languages

Industry and Teaching Experience

RockMelt, Inc. — **Stanford, CA**
Software Engineer — June 2010 – Present
Responsibilities include work on both the front-end browser product (Objective-C++) and on the platform architecture and applications (primarily in-browser JavaScript/HTML and Node). Built dynamic in-browser JavaScript applications that are currently used by tens of thousands of people.

Stanford Computer Science — **Stanford, CA**
Section Leader — January 2010 – Present
Responsibilities include teaching weekly sections, grading programming assignments and exams, and holding office hours.

Arbor Wealth Management — **Lincoln, NE**
Intern — June 2009 – September 2009
Responsibilities included analysis of funds and municipal bonds for stability and expected payouts, as well as bond sales. Built a user-friendly computer interface to track customers and potential portfolios.

Independent Projects

Stanford Debate Society — **Stanford, CA**
Web Portal and Infrastructure — August 2011 – November 2011
Developed an entirely new web portal and server backend for the Stanford Debate Society (debate.stanford.edu), focusing on flexibility, dynamic content updating, and simple, professional look-and-feel, as well as cross-applicability to other student groups or schools. Built using Django and a number of other open-source projects and deployed on Apache FCGI. Open-sourced on GitHub.

ClassiWhale — **Stanford, CA**
Twitter-filtering Web Service — August 2010 – April 2011
Developed a web service and corresponding iPhone application. Used Machine Learning techniques to determine user interest and automatically filter user Twitter feeds to surface the most interesting content. Substantial development in Python, JavaScript, and HTML/CSS, as well as Objective-C. Used many open-source web and natural language libraries. Built primarily with Django and deployed using mod_wsgi. Open-sourced on GitHub.

Publications

Churchill, A. (2009). *Restrictions and Generalizations on Comma-Free Codes.* http://www.combinatorics.org/Volume_16/PDF/v16i1r25.pdf

Work primarily involved development of upper-bounds on the information capacity of classes of (self-synchronizing) comma-free codes, as well as constructive lower-bounds and development of NP-Complete comma-free restrictions.

Honors and Extracurricular Activities

- Tau Beta Pi, Engineering Honor Society
- American Mathematical Society Karl Menger Memorial Award for Mathematics Research
- Stanford Debate Webmaster
- Presidential Scholar
- Fluent in English and Spanish