# Alexander Churchill

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## Education

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

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

**Languages/Skills:** Python, JavaScript/CoffeeScript, Django, Tastypie, Backbone, RequireJS, Node/Connect, Jade, Handlebars, Bootstrap, 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: 3.9 — 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.** — **Mountain View, 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.

## Independent Projects

**Premonit (premonit.com)** — **Menlo Park, CA**
*Collaborative Prediction Platform* — August 2011 – November 2011
Co-founded. Developed both back-end code and web front-end. Developed an all-AJAX app with the front-end using Backbone and RequireJS alongside Handlebars templates and the back-end using Tastypie to serve up JSON from a Postgres database. Deployed with Fabric on EC2 using uWSGI.

**Stanford Debate Society (debate.stanford.edu)** — **Stanford, CA**
*Web Portal and Infrastructure* — August 2011 – November 2011
Developed an entirely new web portal and server backend for the Stanford Debate Society. 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. 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
- Graduate with Distinction in Math and CS