Michael Flashman

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EDUCATION

Cornell University, Ithaca New York, M.S. Applied Mathematics, expected 2014

Reed College, Portland Oregon, B.A. Physics, May 2008, Phi Beta Kappa
Senior Thesis: *Modified Electrodynamics: Fixing Relativistic Field Theories*

COURSEWORK

Graduate

Dynamical Systems	Probability	Real Analysis
Statistical Mechanics	Matrix Computation	Machine Learning
Information Networks	Interactive Comp. Graphics	Physically Based Animation

Undergraduate

Multivariable Calculus	Linear Algebra	Abstract Algebra
Differential Equations	Complex Analysis	Real Analysis
Classical Mechanics	Electrodynamics I & II	Quantum Mechanics I & II

COMPUTER SKILLS

Proficient: Ruby, Python, Java, JavaScript, SQL, HTML/CSS, MATLAB, git, LaTeX
Some Experience: C, OpenGL, GLSL, R, Mathematica, Illustrator, Photoshop

PREVIOUS EMPLOYMENT

Teaching Assistant Aug 2011–May 2013
Cornell University *Ithaca New York*
Served as lead teaching assistant for large (200+ student) introductory programing course taught using MATLAB. Held weekly discussion sections, created grading rubrics and test scripts for student submissions, and supervised 20 undergraduate graders.

Research Assistant Jun 2012–Aug 2012
Cornell University *Ithaca New York*
Investigated entropic methods for detecting short and long timescale patterns of word usage in scientific literature. Developed a Python based program to conduct this analysis on the arXiv e–print database. Worked under the direction of Prof. Paul Ginsparg.

Junior Software Developer Sep 2009–May 2011
Intersect.com *Seattle Washington*
Developed features and oversaw testing for Intersect.com, a Rails web application for community storytelling. Designed and implemented spectral clustering of geo–temporal data and page–rank based content ranking system for search. Worked closely with a team of six other developers and Pulitzer Prize winning journalist.

SELECT PROJECTS

Bonerbucks.org (Aug 2012–present) Designed and built a Rails web application for tracking defaced currency. Hosted on Heroku and Amazon S3.

Desert Oasis (Spring 2013) Created an interactive 3D desert scene using Java, OpenGL, and GLSL. Developed an original physics engine and GPU based sand dune simulation.

Seed Drop (Spring 2013) Added rigid body coupling to a 2D fluid simulation in Java. Used the modified system to study the wind dispersal of plant seeds.

Cellular Automata (Jan 2012, April 2013) Developed a simple JavaScript framework for visualizing various elementary cellular automata in 1 and 2 dimensions.

For more information about these projects, including technical descriptions and video demos, please visit: http://cam.cornell.edu/~mtf53

INTERESTS

ceramics, art, taxidermy, soccer, gymnastics, burning man

REFERENCES

Kris Selden, Lead Engineer at Yapp, New York NY
Formerly, Lead Developer at Intersect.com
917–434–7525 • kris.selden@gmail.com

Dr. Daisy Fan, Senior Lecturer of Computer Science, Cornell University, Ithaca NY
Teaching Assistant Supervisor
607–255–1181 • dfan@cs.cornell.edu

Dr. Joel Franklin, Assistant Professor of Physics, Reed College, Portland OR
Undergraduate Thesis Advisor
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