James Pfeiffer – Résumé

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Mathematician looking to make a career change into software development due to love of programming, algorithms, and product development.

Experience

University of Washington Seattle, WA
Research Assistant *March 2012 to Present*
Instructor *June 2011 to March 2012*
Teaching Assistant *September 2009 to June 2011*

- Performed mathematical research. Developed and tested conjectures. Wrote computer simulations to gather data. Wrote and published papers and gave seminar talks on results. Main organizer of optimization seminar.
- Taught differential equations and linear algebra college classes. Designed and gave lectures, homework, and exams.
- Led classroom discussion sections for college calculus classes. Graded homework and exams. Held office hours.

Future Advisor Seattle, WA
Software Developer, Intern *March 2012 to May 2012*

- Implemented a portfolio optimization component using an interface to an open-source optimization package. Wrote test cases and checked expected behavior. Solved issues in converting optimization package output to usable data.

University of Washington Robinson Center Seattle, WA
Instructor *July 2010 to August 2010*

Center for Talented Youth Santa Cruz, California
Teaching Assistant *Summers 2006, 2007, and 2009*

University of California, Davis Davis, California
Research Assistant *Summers 2007 and 2008*

Publications

A Semidefinite Approach to the K_i Cover Problem *J. Gouveia and J. Pfeiffer*
Submitted to *Operations Research Letters*, 2012

Bootstrap Percolation on the Hamming Torus *J. Gravner, C. Hoffman, J. Pfeiffer, and D. Sivakoff*
Submitted to *Annals of Applied Probability*, 2012

Education

University of Washington – *PhD, Mathematics* *September 2009 to Demember 2013*
Advisor: Rekha Thomas
Thesis: Combinatorial Optimization and Sums of Squares

University of California, Davis – *BS, Mathematics* *September 2005 to June 2009*
GPA: 3.93

Programming Projects

Google App Engine

- Created an email reminder program to allow users to set reminders to be sent to them in the future.
- Wrote a Magic: The Gathering website to create sealed deck pools and drafts for tournament practice.

Lua

- Created several games with the Love2D game framework.

Python

- Mathematical research code using packages including SAGE, numpy, matplotlib, scipy, sympy.
- Implemented natural langauge processing routines for Coursera class.
- Implemented simulated annealing for mathematical research simulations.

Other Software

- Comfortable in Lisp and C.
- Version control (git).
- Linux server and desktop experience.
- Experience with MATLAB and many numerical packages.