Lucas Roesler

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https://github.com/LucasRoesler

Technical Skills

- Languages: Python, Django, AngularJS, MongoDB, PostgreSQL, PHP, MySQL, HTML, CSS, Javascript, jQuery, R, Bash
- Applications: Amazon Web Services (AWS), Git, Sage, Mathematica, LaTeX
- Operating Systems: UNIX/Linux, Mac OS X, Windows

Education

Ph.D. in Mathematics, *University of Connecticut (UConn)*, Storrs, Connecticut - **May 2012**

Dissertation Title: "Algebras from surfaces and their derived equivalences"
Advisor: Dr. Ralf Schiffler

M.S. in Mathematics, *University of Connecticut (UConn)*, Storrs, Connecticut - **May 2009**

B.A. in Mathematics, *Central Connecticut State University (CCSU)*, New Britain, Connecticut - **May 2007**

Professional Experience

Lead Developer, EventBoard, Salt Lake City, Utah - **2015 – present**

- Django web development.
- Designed and built user management and permissions systems.
- Designed API documentation system using Swagger.
- Manage backend development team.
- Increase database migration stability.

Python - Django - PostgresSQL - AWS

Lead Developer, JobDash, Salt Lake City, Utah - **2013 – 2015**

- AngularJS and Django web development.
- Designed and built an analytics system in PostgreSQL and MongoDB.
- Manage and implement development processes for a team of developers.
- Manage server uptime and deployment on AWS and DigitalOcean with Fabric.
- Decrease page load times by a factor of 10.

Python - Django - AngularJS - PostgreSQL - MongoDB - AWS - LaTeX

Software development, SAIC, Tucson, Arizona - **2013**

- Researched and implemented new feature detection algorithms in Python and C++.
- Managed the transition of projects from CVS and SVN to Git.
- Implemented hooks to enforce guidelines and workflow procedure.
- Implemented new features for active websites in Django.

Python - Django - C++ - Git

Web development, *Pedegogy in Large Lectures*, UConn, Storrs, Connecticut - **2011 – 2012**

- Designed, created, and managed the webpage, videos, surveys, and raw data reports for the Pedagogy in Large Lectures research project.

- Managed the transition to new developers.

PHP - MySQL - Javascript - LaTeX

Web development, *Mathematics Department*, UConn, Storrs, Connecticut - **2009 – 2012**

- Created secure forms for administrative use.
- Updated and created new secure forms for student use.
- Implemented basic security for existing web forms.
- Created extensive user and developer documentation.

PHP - MySQL - Javascript

Public Projects

Django Encrypted Json Field - https://github.com/LucasRoesler/django-encrypted-json

- Store JSON in Postgres with encrypted values and plain text keys.
- Allows partial encryption, you can specify a list of keys to skip.

Django Cryptographic Fields - https://github.com/foundertherapy/django-cryptographic-fields

- Contributions to allow key rotation and general improvements.

Other Experience

Visiting Instructor in Mathematics, *Lebanon Valley College*, Annville, Pennsylvania **2012 – 2013**

Finite Mathematics - Calculus 1 - Differential Equations

Teaching Assistant, *UConn*, Storrs, Connecticut - **2007 – 2012**

Discrete Mathematics - Mathematical Modeling - Calculus 1a - Calculus 1 - Calculus 2 - Business Calculus

Research Assistant, *Pedagogy in Large Lectures*, UConn, Storrs, Connecticut - **2011 – 2012**

Integrated online videos and flashcards to improve learning in large lectures. Created content for, implemented, and maintained the web resources for displaying content and collecting survey data.

Implementation of Crystals of Generalized Young Walls, a method to construct combinatorial mathematical objects called crystals in the open source computer algebras system Sage.

Source available at https://bitbucket.org/Theaxer/sage
Accepted for inclusion into the Sage combinat branch: http://trac.sagemath.org/sage_trac/ticket/14130

Python - Sage

Publications

1. L. David-Roesler. *The AG-invariant for m-angulations*, submitted, available online: arXiv:1210.6087
2. L. David-Roesler. *Derived Equivalence in Surface Algebras via Graded Equivalence*, 30 pages, to appear in Algebr. Represent. Theory. doi:10.1007/s10468–012–9384–9.
3. L. David-Roesler and R. Schiffler. *Algebras from surfaces without punctures*. J. Algebra 350 (2012). pp. 218–244. doi:10.1016/j.jalgebra.2011.10.034.

Interests

- Rock climbing/bouldering, home brewing, long distance running (10k – half marathon), hiking, reading, tabletop gaming, and participating in open source projects (Ubuntu, Gnome, Gedit).