Andrew M. McNutt

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Education

Reed College
Bachelor of Arts, Physics, May 2014, GPA: 3.29/4.00
Senior Thesis: *Non-equivalent Lagrangian Mechanics*, advised by Nelia Mann

Publications

AM Clark, K Dole, A Coulon-Spektor, A McNutt, G Grass, JS Freundlich, RC Reynolds, & S Ekins. "Open Source Bayesian Models: I. Application to ADME/Tox and Drug Discovery Datasets." Journal of chemical information and modeling (2015).

J Franklin, Y Guo, A McNutt, & A Morgan. "The Schrodinger-Newton system with self-field coupling." Classical and Quantum Gravity 32, no. 6 (2015): 65010-65024.

Work

Uber
Visualization Engineer *October 2015 - Present*
Worked as a embedded front-end visualization developer on a variety of teams and platforms. Developed curriculum and taught a weekly visualization education sessions for new engineers. Essential projects included a webGl based map visualization system that allowed users to dynamically interact with millions of rows of geo-spatial data across a variety of formats, an analytics platform for monitoring the health and business outcomes of AB testing experiments, and a CMS for exploring saved queries via a tree diagrams.

Collaborative Drug Discovery
Scientific Visualization Developer *November 2014 - October 2015*
Acted as a software developer on a wide variety of projects on all ends of a Rails based stack. Founded and ran a lunch and learn collaborative educational program for the team. Selected projects include: optimizing machine learning protocols, a visualization platform for high dimensional drug discovery data, and technical writing for scientific publication.

Reed College
Research Assistant *May 2013 - August 2013*
Studied computational simulations of Quantum Gravity as part of Joel Franklin's research. Worked in collaboration with a research team to construct a coherent set of numerical solutions to the coupled Newton-Schrodinger with self-interaction problem. Specialized in the development of bound states for this system. Developed parallel model for the Klein-Gordon system. These efforts culminated in a paper published in the Journal of Classical and Quantum Gravity.

Physics Computation Lab Manager *August 2012 to May 2013*
Selected by faculty to manage a Mac based computation cluster. Duties included management of software updates and other technical issues. Assisted other students with research that required the use of parallel systems. Principle technologies included Grid Mathematica and Radmind.

Skills&Technologies

Web Dev: React, Flux/Redux, Node, Backbone, jQuery, SCSS/Sass, SQL, Ruby, Ruby on Rails, Python, Flask
Visualization: d3, Processing, webGL
Scientific Computing: Mathematica, Grid Mathematica, Numpy, Pandas
Other: Latex, Omnigraffle, Photoshop, Sketch