William "Neal" Miller, Ph.D.

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EXPERIENCE

RigMinder   Spring, TX
Lead Software Engineer   *June 2014—Present*

- Head of the team responsible for all software development as well as server administration and support, managing one direct report
- Development responsibilities include data management and analysis (Python, Go), web applications (JavaScript, PHP, Flask), PIC microcontroller firmware (C), and client software (C#, C++, LabView)
- Administration responsibilities include PostgreSQL database management and Linux server administration

Reasoning Mind   Houston, TX
Learning Analytics Engineer   *March 2013—June 2014*

- Applied existing algorithms and developed new techniques for the application of educational data mining to the Reasoning Mind system to trace student knowledge and diagnose topics for remediation
- Analyzed student log data from a pilot implementation of a new curriculum to inform revision of the existing product as well as future development of new offerings

Senior Business Analyst   *July 2012—August 2013*

- Designed and improved the processes by which other employees worked with each other and with those served by the organization
- Part of the team responsible for Salesforce.com administration and development

Columbia University in the City of New York   New York, NY
Graduate Research Assistant   *August 2007—May 2012*

Advisor: Angelo Cacciuto

- Wrote Monte Carlo and molecular dynamics simulations in C for the study of self-assembly in soft matter systems
- Analyzed the results of the simulations primarily using Python

EDUCATION

Columbia University in the City of New York   New York, NY
Ph.D., Chemical Physics, *with distinction*   *May 2012*

- Dissertation: *Self-organization in systems of anisotropic particles*

The University of Texas at Austin   Austin, TX
B.S., Chemistry, Honors, *with highest honors*   *May 2007*

- Thesis: *Single-molecule spectroscopic studies of conjugated polymers*

SKILLS

Languages: Python, Go, C, Java, C#, JavaScript
Other Technologies: PostgreSQL, Git, R, RapidMiner, Salesforce.com, Linux
Machine Learning: regression, decision trees and random forest, neural networks, probabilistic graphical models, support vector machines