

Ryan M Harrison

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Education

University of Oxford (Oxford, UK)
DPhil Student, Biological Physics

Expected 2014

- Molecular simulation
 - Coarse-grained DNA modeling, including various rare event methods.
 - Simulation software in C++; analysis suite in Python. Testing taskmaster.
- Single-molecule fluorescence
 - TIRF-FRET studies of the RecQ DNA helicase.
 - Image processing and time series analysis with MATLAB.
 - Extensive wetlab experience, spanning culture, purification and QC.

Johns Hopkins University (Baltimore, MD)
Bachelor of Science in Biomedical Engineering; Minor in Economics.

December 2009

Danish Institute for Study Abroad (Copenhagen, Denmark)
International Business & Economics Program

Fall 2009

Software

NaturalMotion (Oxford, UK)

Summer 2013

- R&D for the Morpheme procedural animation engine.
- Agile development in C++ with Microsoft toolchain.

Ginkgo BioWorks (Boston, MA)

Jan – May 2010

- Developed Django and Ruby on Rails apps for rapidly prototyping engineered biological systems. Exceeded milestone payment requirements.
- Collaborated directly with lab scientist to develop software specifications, quickly iterate builds and assist with hardware integration.

Ion Torrent Systems (Guilford, CT)

Summer 2009

- System optimization and benchmarking on a next generation DNA sequencer.
- Wrote desktop Pyjamas/PyQT app to analyse quality and track improvement.

Computational Proteomics Research Asst (Baltimore, MD)

2003 – 2007

- Developed a model for pH-sensitive regions within proteins; C++ implementation in Rosetta protein structure suite, with analysis in Perl and R.
- Mentored high school student with interest in protein structure prediction.

Policy

Maryland General Assembly (Annapolis, MD)

Spring 2009

- Prepared testimony, policy memos, and statements for a Baltimore City Delegate.
- Coordinated with stakeholders to amend legislation brought before committee.

Baltimore City Health Department (Baltimore, MD)

Fall 2007

- Analyst for the 2008 Baltimore City Health Status Report.
- Aided in the execution of an Influenza monitoring initiative (establishing a quantitative baseline-metric) and a youth anti-smoking campaign (public relations).

Honors

NIH Graduate Student Research Award (Travel Award)

2011

National Science Foundation Graduate Research Fellow (3 year, \$120k)

2010

Inductee, National Gallery for America's Young Inventors (\$5k)

2006

5th Place, Intel Science Talent Search (\$25k)

2005