James J Porter

web: jamesporter.me
mail: james@jamesporter.me

Experience

- **Software Engineer**, 2014-present

  Center for Data Intensive Science — Chicago, Illinois

  - Migrated almost 2 PB of genomic data from a legacy storage system into various S3-like backends.
  - Imported and harmonized metadata from poorly organized tab-delimited text files into a PostgreSQL / Elasticsearch backend.
  - Developed HTTP APIs for accessing genomic data and metadata.

- **Software Engineering Intern**, 2014

  Stripe — San Francisco, California

  - Developed internal tooling for large scale correctness and performance testing of financial operations code.
  - Refactored legacy code to improve testability.

- **Student Research Programmer**, 2013-2014

  Laboratory for Advanced Computing — Chicago, Illinois

  - Developed, deployed, and improved software infrastructure for doing bioinformatic analyses on cloud computing systems, primarily using Python.
  - Refactored and dramatically improved reliability of subsystem for automated HPC cluster provisioning.
  - Contributed to widely used open source projects including bcbio-nextgen and IPython.

- **Core Tutor**, 2013-2014

  University of Chicago Department of Computer Science — Chicago, Illinois

  - Tutored introductory computer science students in Racket, Java, Haskell, and Python.

- **Recurse Center**, 2013

  New York City, NY

  recurse.com

  - "a free, self-directed, educational retreat for people who want to get better at programming, whether they've been coding for three decades or three months"
  - Studied new programming languages, fields, techniques, etc.
  - Contributed to a variety of open source projects.

- **Laboratory Teaching Assistant**, 2012-2013

  University of Chicago Biological Sciences Division — Chicago, Illinois

  - Instructed first-year students in experimental and computational molecular biology lab techniques.
  - Managed a teaching laboratory of 14-20 students for four hours each week.

- Taught scientific programming with Matlab, taking students from zero knowledge to implementing models of genetic switches.

- **Undergraduate Research Assistant**, 2011-2013

  Ilaria Rebay Lab, University of Chicago Ben May Department for Cancer Research — Chicago, Illinois

  - Designed, implemented, and optimized simulations of genetic systems.
  - Performed wetlab experiments aimed at understanding mechanisms of transcriptional repression in fruit flies.
  - Facilitated collaboration between three research groups at two universities.

Education

- **The University of Chicago** — Chicago, Illinois

  Biological Sciences, Minor in Computer Science, 2014

  GPA 3.98/4.0

- **Chardon High School** — Chardon, Ohio

  2010

  GPA 4.0/4.0

Skills

Computational

- Experienced user and programmer of UNIX systems and associated tools.
- Comfortable programing in a wide variety of domains and styles.
- *Languages*: Python, Ruby, C, Javascript (and HTML/CSS), Julia, Lisp(s), Bash scripting, dabbler in various others
- *Datastores*: basic familiarity with MongoDB, PostgresSQL, Elasticsearch
- *Tools*: Git, Github, Travis CI, Openstack, Saltstack, Consul, familiar with basic setup and configuration of standard Linux server components (webservers, process supervisors, logrotate, etc.)

Laboratory

- Molecular biology (cloning, PCR, etc.)
- Microinjections
- Confocal fluorescence microscopy
- care and breeding of *Drosophila melanogaster*

Miscellaneous

- One of the primary organizers of JuliaCon 2014, which took place in Chicago and was the first conference on the Julia programming language.

Honors and Awards

- Phi Beta Kappa Society, 2013
- Barry M. Goldwater Scholarship, 2013
- BSCD Fellowship, *University of Chicago Biological Sciences Division*, 2012
- Research Experiences for Undergraduates Fellowship, *Chicago Center for Systems Biology*, 2011
- National Merit Scholarship Finalist, 2010
- National AP Scholar, 2010
- Robert Byrd Scholarship, 2010
- Eagle Scout, *Boy Scouts of America, Troop 93*, 2009