

James J Porter

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Experience

- **Software Engineer**, November 2014 - November 2015
University of Chicago Center for Data Intensive Science, Genomic Data Commons Team — Chicago, Illinois
 - Migrated almost 2 PB of genomic data from legacy storage systems into new S3-compatible storage.
 - Imported and harmonized metadata from poorly organized legacy systems into PostgreSQL / Elasticsearch.
 - Developed HTTP APIs and backend services for accessing genomic data and metadata, primarily using Python.
 - Developed and maintained configuration for operational aspects of the system, including deployment, service discovery, etc., using Saltstack and Consul.
- **Software Engineering Intern**, July 2014 - October 2014
Stripe — San Francisco, California
 - Developed internal tooling for large scale correctness and performance testing of financial operations code, primarily using Ruby.
 - Refactored legacy code to improve testability.
- **Student Research Programmer**, Spetember 2013 - June 2014
University of Chicago Center for Data Intensive Science — Chicago, Illinois
 - Developed, deployed, and improved software infrastructure for doing bioinformatic analyses on cloud computing systems, primarily using Python.
 - Refactored and improved reliability of subsystem for automated HPC cluster provisioning.
 - Contributed to widely used open source projects including [bcbio-nextgen](#) and [IPython](#).
- **Core Tutor**, September - December 2013
University of Chicago Department of Computer Science — Chicago, Illinois
 - Tutored introductory computer science students in Racket, Java, Haskell, and Python.
- **Recurse Center**, June - August 2013
New York, NY
[recurse.com](#)
 - Attended 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”.
 - Contributed to the [Julia programming language](#).
 - Wrote [virtualenvwrapper.el](#) to improve the experience of Python development in Emacs.
 - Taught myself web programming (CSS/HTML/Javascript, Flask), Julia, and some Clojure.
- **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.
- *Languages:* Python, Ruby, C, Javascript, HTML/CSS, Julia, Lisp(s), Bash scripting, dabbler in various others
- *Datastores:* familiar with usage and basic operation of PostgreSQL and Elasticsearch, some familiarity with MongoDB and Neo4J
- *Tools:* Git, Github, Travis CI, Openstack, automated configuration management (Saltstack), Consul, familiar with basic setup and configuration of typical Linux server components (webservers, process supervisors, logrotate, etc.), as well as typical packaging and deployment tools for Python (and to a lesser degree Ruby, Javascript)

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