James J Porter

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Experience

Independent Technical Consultant / Sabbatical (June 2023 - present)

- Ongoing software development for the Recurse Center on a part-time, contract basis, while taking some time for personal goals, including a thru-hike of Vermont's Long Trail and a 700 mile-long hike on the Pacific Crest Trail.
- My work during this time includes improving performance of a core internal recruiting tool using predictive data pre-fetching, adding new search features (e.g. more data sources, support for multiple locations), saving money and simplifying code by removing integrations with now-unused third-party services, many bugfixes, and important ongoing infrastructure work (e.g. keeping up with database and framework upgrades to prevent security issues).

Facilitator (March 2016 - Sept 2021) → **Senior Facilitator** (Sept 2021 - May 2023)
Recurse Center — New York, New York

- The Recurse Center ("RC") is a free, self-directed educational retreat for programmers with an integrated recruiting agency. I worked on running and improving all aspects of RC's business and community, including building software, infrastructure work, data analysis, business strategy, writing, community management, and more. My technical work at RC primarily used Ruby, Rails, PostgreSQL, JavaScript (including React and Redux), and occasionally Python for data-focused projects.
- With a colleague, I built RC Together, a real-time, virtual space used to host the retreat online in 2020 and beyond. Features include a 2D world with real-time movement and editing, text and audio chat, Zoom syncing, multi-tenancy, a user-facing API, and more. This enabled RC to survive the pandemic, and many attendees described it as the best remote experience they'd had from any job or educational institution.
- Though years of iterative changes and new features, I dramatically improved RC's internal recruiting software, making the recruiting team more efficient and ultimately improving revenue.
  - Built a new search tool that ingested and indexed all of RC's internal data on candidates, speeding up the process of finding and validating potential matches for roles at client companies.
  - I added new data modeling capabilities that enabled granular tracking of job search progress. I then built data pipelines and warehouses that enabled analyzing this data to answer important business questions (e.g. "what will our revenue be like three months from now?") for the first time.
  - Fixed many time-wasting bugs, including tricky data consistency and concurrency issues.
- I built lots of other software, including data pipelines for RC's admissions system, software for matching retreat attendees at random for daily "coffee chats", automating the retreat onboarding process and communications, new channels for attendees to give feedback about the retreat, improved tools for onboarding and managing client companies, and more.
- I also did lots of meaningful non-programming work at RC, including leading the hiring and onboarding process for several new hires, developing and putting into practice principles for self-directed education, advocating successfully for a transformative mindset shift in our recruiting business, helping run RC's annual alumni reunion, and planning and launching experiments like mini retreats, the *Still Computing* newsletter, an educational compute cluster for the RC community, and many more.

Software Engineer, November 2014 - November 2015
University of Chicago Center for Translational Data Science — Chicago, Illinois

- Helped build the National Cancer Institute's Genomic Data Commons, a system for storing and organizing cancer genomics data for the clinical research community.
- Built and operated a fault-tolerant distributed work scheduler for re-processing over two petabytes of genomic sequence data with a modern bioinformatics pipeline, using Python, Docker, and Consul. The system used 40k cores distributed over ~1000 machines at its peak, and enabled to us to meet a tight, crucial deadline and launch the GDC on time.
- Built the core HTTP API that enabled users to access the system, as well as ETL processes for continuously syncing metadata from multiple sets of manually managed, poorly organized CSV and Excel files, doing entity resolution, and storing the resulting normalized records in Postgres and Elasticsearch.
- Built and maintained custom deployment, operations, and monitoring tooling using Python, Consul, Nginx, and Openstack.

Software Engineering Intern, July 2014 - October 2014
Stripe — San Francisco, California

- Created a system for large-scale regression testing using Ruby, which ran proposed code changes against a large dataset of transaction records from our banking partners and highlighted semantically significant changes in the output.

Education

- **The University of Chicago** — Chicago, Illinois
  Biological Sciences, Minor in Computer Science, 2014, GPA 3.98/4.0