Alyssa Frazee

San Francisco, CA
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SKILLS

Software Engineering
Data Science
Statistics
Computational Biology
Writing
Public Speaking

EDUCATION

Johns Hopkins University, Baltimore, MD

PhD — 2010 - 2015
Biostatistics

St. Olaf College, Northfield, MN

BA — 2006 - 2010
Math
Statistics minor

EXPERIENCE

Stripe, Senior Software Engineer (Machine Learning)
San Francisco, CA — March 2015 - present

- Full-stack expert on fraud prevention: my projects prevent stolen credit cards from being used to make purchases online on any business using Stripe to accept payments
- Find signals for fraud based on past observed patterns in our payments network, and implement these signals in the realtime systems
- Design and implement experiments and statistically sound metrics and simulations for model evaluation

Recurse Center
New York, NY — Summer 2013

- Sabbatical with goal of becoming a better programmer
- Developed fluency in Python
- Built a web app, text editor extension, text-based game, and an app to schedule teaching assistants and office hour for a 500-student course I co-taught later in 2013.

PROJECTS

Estimating the gender gap in open-source software (2014): I gathered my own data and wrote a blog post in 2014 where I estimated the percentage of GitHub repositories owned by each gender. Featured in FiveThirtyEight's weekly roundup of their favorite data journalism.

Guide to R for beginners (2014): I wrote a blog post on introducing R to a non-programmer. It became relatively popular (with over 10K pageviews in its first day and an appearance on Hacker News, and sometimes people still email me because they found it useful).

Committee Checker (2014): I made an app that students in my department could use to make sure their oral exam committee satisfied all of the school's requirements. It's still being used as of fall semester 2017.

PhD research:

- Polyester: simulation software to evaluate new statistical techniques for understanding differences in gene expression (8K downloads, academic paper published in *Bioinformatics* in 2015)
- Ballgown: easy-to-use software for analyzing and visualizing results of gene expression experiments (36K downloads, paper published in *Nature Biotechnology* in 2015)
- DER Finder: high-resolution gene-expression analysis (published in *Biostatistics* in 2014)
- ReCount: database of gene expression data -- I did all the heavyweight preprocessing for you so you can carry on with your genomics research! Paper published in *BMC Bioinformatics* in 2011, and my colleagues published version 2 in 2017 in *Nature Biotechnology* due to high demand.