Timothy Barry

tbarry2@andrew.cmu.edu • https://timothy-barry.github.io

EDUCATION

Carnegie Mellon University *2018 –*
PhD in Statistics and Data Science
Advisors: Kathryn Roeder, Eugene Katsevich

University of Maryland, College Park *2014 – 2018*
BS in Mathematics with high honors
Minor in Computer Science

AWARDS

- Howard Hughes Medical Institute Fellowship *2017*
- Maryland Summer Scholars Research Grant *2016*
- Banneker-Key Scholarship, University of Maryland's most prestigious scholarship *2014*

TEACHING ASSISTANTSHIPS

- Statistics 36-350: Statistical computing *Fall 2018*
- Statistics 36-469: Statistical genomics and high-dimensional inference *Spring 2020*

MENTORING

- Songcheng Dai (Computational Biology Masters student at CMU, joint with Kathryn Roeder) *2021 - 2022*
Thesis topic: algorithmic and statistical tools for large-scale single-cell data.

PAPERS

- **T Barry**, X Wang, J Morris, K Roeder, E Katsevich. "Conditional resampling improves calibration and sensitivity in single-cell CRISPR screen analysis." Genome Biology, to appear. *2021*
Reviewers' choice, American Society of Human Genetics conference, 2021.
- J Morris, Z Daniloski, J Domingo, **T Barry**, M Ziosi, D Glinos, S Hao, E Mimitou, P Smibert, K Roeder, E Katsevich, T Lappalainen, N Sanjana. "Discovery of target genes and pathways of blood trait loci using pooled CRISPR screens and single cell RNA sequencing." Preprint on bioRxiv *2021*

Undergraduate

- **T Barry***, E Gurarie*, F Cheraghi, I Kajola, W Fagan. "Does dispersal make the heart grow bolder? Avoidance of anthropogenic habitat elements across wolf life history." *Animal Behaviour* 166. **Joint first authorship*. *2020*
- **T Barry**. "Collections in R: Review and Proposal." *The R Journal 10.1*. *2018*

TALKS

- "Conditional resampling improves calibration and sensitivity in single-cell CRISPR screen analysis." RECOMB-Seq. Contributed. *2021*
- "Conditional resampling improves calibration and sensitivity in single-cell CRISPR screen analysis." Xin He Lab, Department of Genetics, University of Chicago. Invited.

SERVICE AND SCIENCE OUTREACH

- Volunteer math, science, and English tutor to elementary and middle school students through UMD Lakeland STARS program. *2015 – 2018*

COMPUTING

- Languages: R, Python, C/C++, Nextflow
- Version control systems: Git/Github
- Operating systems: Unix

Updated November 2021.