




Jonah E. Einson

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About Me


I am recent PhD graduate, interested in applying tools from data science to real world problems in computational biology. I studied functional genomics in grad school, and I am excited to utilize this experience in a future industry career as a computational biologist.





Social Network


 [Linkedin Link](#)
 [Twitter Link](#)
 [Github Project Page Link](#)




Skills


Stats **Genomics** **Bioinformatics**
NGS **DNA/RNA** **ML/AI**
Molecular Biology **Linux** **macOS**



 **Coding**

-  Bash, R, and Python
-  Version control with git
-  Java, Perl and SQL
-  L^AT_EX

 **Genomics**

-  RNA-seq and NGS Processing Pipelines
-  FASTQ, BAM, VCF and GTF file formats
-  QTL analysis, Coloc, SuSiE

 **Computational Infrastructure**

-  LSF and Slurm
-  Nextflow in Google Cloud

Education

2017 – 2022 **Ph.D.** **Biomedical Informatics** Columbia University Irving Medical Center
Thesis research in the Department of Systems Biology, with advanced coursework in data science and extensive TA experience.
Doctoral Thesis: Common and rare genetic effects on the transcriptome and their contribution to human traits. Defended 8/30/2022

2013 – 2017 **Dual B.S.** **Biochemistry & Statistics** University of Massachusetts Amherst
Top-tier undergraduate program focused on research, with a unique addition of advanced training in statistics.
Commonwealth Honors College Thesis: The Environmental Microbiomes of an Industrial Food Fermentation Facility

Scientific Experience

2018 – 2022 **Doctoral Research** Columbia University Irving Medical Center

- Advised by Dr. Tuuli Lappalainen at the New York Genome Center and the Department of Systems Biology
- Streamlined analysis of thousands of whole genome sequencing samples from GTEx, TOPMed, and the SSC
- Optimized a statistical method for detecting evidence of genetic modifiers of rare variant penetrance
- Utilized AlphaFold to study protein structure perturbation related to splicing QTLs and trait risk
- Presented at the American Society for Human Genetics annual meeting, Biology of Genomes, and the Gordon Research Conference in Genetics and Genomics
- Co-authored 2 papers published in *Science*

2014 – 2017 **Undergraduate Research** University of Massachusetts Amherst

- Advised by Dr. David Sela in the Department of Food Science
- Gained early experience generating and analyzing Illumina sequencing data from microbial 16S analyses
- Published my first independent project, studying microbial communities in an industrial food processing environment

Publications

Authorship on 6 scientific papers. Refer here for full list.

Extra-Curricular Activities

Leadership *Graduate Student Organization Social Chair:* Organized happy hours, sports, theater, etc. for the graduate program at CUIMC.
Graduate Initiative for Diversity Treasurer: Assisted this new organization on campus with finances related to event planning.

Mentorship *Masters Student Intern:* Worked with a talented new student on an extension to my thesis project
Science Matters Research Internship: Constructed projects for two high school summer interns

Teaching *Science Honors Program Instructor:* Designed and lectured a weekly bioinformatics course taught to 40-50 gifted high school students

Travel Half year as a visiting scholar at SciLifeLab. Stockholm, Sweden

Sports Cycling, Backpacking, Skiing