

Kelly L. Sovacool

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Education

2018-present **PhD Student - Bioinformatics**, *University of Michigan*,
Dept. of Computational Medicine and Bioinformatics,
Medical School | Rackham Graduate School
Advisor: Pat Schloss

2014-2018 **BS Biology**, *University of Kentucky*
◦ Minor: Computer Science
◦ 4-year full tuition Presidential Scholarship
◦ Graduated Cum Laude
◦ Departmental Honors in Biology
◦ Lewis Honors College

Research Experience

2019-present **Graduate Student Research Assistant**, [Schloss Lab](#),
Dept. of Microbiology and Immunology, University of Michigan
◦ Developing bioinformatics tools for microbial ecology.

2018-2019 **Rotation Student Researcher**, *Program in Biomedical Sciences*,
University of Michigan
◦ Arvind Rao lab: identifying master transcription factors in glioma progression.
◦ Pat Schloss lab: benchmarking clustering algorithms for microbiome research.
◦ Lana Garmire lab: characterizing lncRNA variation across cancer types.
◦ Muneesh Tewari lab: exploring the miRNA profiles of healthy individuals.

2015-2018 **Undergraduate Lab Assistant**, [Moseley Bioinformatics Lab](#),
Dept. of Molecular and Cellular Biochemistry, University of Kentucky
◦ Developed a computational tool for identifying sets of orthologous and
paralogous gene products in whole genomes to facilitate collinearity analysis
and detection of gene duplication events.

2016-2018 **BIO395 Independent Research Student**, [Weisrock Lab](#),
Dept. of Biology, University of Kentucky
◦ Developed scripts and a SNP calling pipeline for amplicon sequence data.
◦ Population structure analysis of the *Ambystoma tigrinum* species complex.
◦ Bayesian species delimitation of the *Desmognathus fuscus* species complex.

- 2015-2016 **Undergraduate Lab Assistant**, [Jaromczyk Lab](#),
Dept. of Computer Science, University of Kentucky
- Maintained the *Epichloë festucae* genome project database.
 - Analyzed RNA-seq data of *Chenopodium quinoa* and coffee ringspot virus.

Awards

- Dec 2017 **Oswald Research & Creativity Award**, *University of Kentucky*
- Awarded a \$200 prize for second place in the Biological Sciences category.
 - Manuscript title: "Developing a Global Homology and Collinearity Analysis Framework for Identifying Gene Duplication Events."
 - Advisor: Prof. Hunter NB Moseley.
- May 2017 **Summer Research Grant**, *University of Kentucky*
- Awarded a \$2,000 grant by the UK Office of Undergraduate Research to work full time on a research project during the summer.
 - Project title: "Developing a Global Homology and Collinearity Analysis Framework for Identifying Gene Duplication Events."
 - Advisor: Prof. Hunter NB Moseley.

Presentations

- Apr 2018 **Developing a Global Homology Analysis for Comparative Genomics**,
Advisor: Prof. Hunter NB Moseley
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky
 - Oral, *Systems Biology & Omics Integration Seminar*, University of Kentucky
 - Poster, *National Conference on Undergraduate Research*, University of Central Oklahoma
- Apr 2016 **Processing RNA-seq Reads of Plants Infected with the Coffee Ringspot Virus**, *Advisor: Prof. Jerzy W Jaromczyk*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky
 - Poster, *UT-KBRIN Bioinformatics Summit*, Cadiz, KY
- Apr 2015 **The Effect of Meditation on Performance**, *Advisor: Prof. Bruce OHara*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky

Volunteer Service

- 22-23 May 2019 **Software Carpentry helper**, during 2-day [workshop](#) teaching the Unix shell, version control with *Git*, and programming in *Python*.
University of Michigan
- 25 Apr 2019 **DNA Day Ambassador**, taught an epigenetics lesson to high school biology students, [MI DNA Day](#), Pioneer High School
Ann Arbor, MI
- 20 Mar 2019 **Workshop helper**, during GSBES meeting teaching [data visualization with Python](#), [Graduate Society of Black Engineers and Scientists](#).
University of Michigan

- 16 Mar 2019 **Capstone activity leader**, *FEMMES capstone event for middle school students - taught binary numbers with Ozobots, Females Excelling More in Math, Engineering, & Science.*
University of Michigan
- 01 Mar 2019 **Software Carpentry helper**, *during 2-day workshop teaching the Unix shell, version control with Git, and programming in Python.*
University of Michigan
- Jan-May 2019 **Capstone project mentor**, *Girls Who Code at UM-DCMB.*
University of Michigan
- 17-18 Dec 2018 **Software Carpentry helper**, *during 2-day workshop teaching the Unix shell, programming in R, and version control with Git.*
University of Michigan
- 2018-present **Summer experience committee member**, *Helped plan, apply for funding, and develop curriculum for our Data Science Summer Experience for high school students in downtown Detroit, Girls Who Code at UM-DCMB.*
University of Michigan
- 2012-2017 **Tutor**, *for high school and college students in Biology, Calculus, Chemistry, Computer Science, and Bioinformatics.*
- 2009-present **Live sound engineer**, *for various churches and non-profit organizations.*
- o Setting up, maintaining, repairing, and operating front of house, monitor, and recording systems during sound checks, rehearsals, services, and concerts.
 - o Training new sound techs in the art and science of live sound.