

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 & pipelines for microbial ecology.
◦ 16S rRNA sequence analysis and tandem mass spectrometry data analysis.

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

- 2019-2020 **NIH T32 Bioinformatics Training Program Fellow**
University of Michigan
- Dec 2017 **Oswald Research & Creativity Award**, *UK Office of Undergraduate Research*, 2nd place in the Biological Sciences category (\$200)
University of Kentucky
- May-Aug 2017 **Summer Research Grant**, *UK Office of Undergraduate Research*, (\$2,000)
University of Kentucky

Presentations

- 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
- 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
- 2015 **The Effect of Meditation on Performance**, *Advisor: Prof. Bruce OHara*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky

Service

- 2019-present **Graduate Student Coordinator**, *organize monthly meetings for researchers to sharpen their data analysis skills*, [Data Analysis Networking Group](#)
University of Michigan
- 2019-present **Executive Committee Member**, *plan and develop curriculum for a weekly club teaching introductory programming & data science to high school women*, [Girls Who Code at UM-DCMB](#)
University of Michigan
- 2018-present **Summer Experience Committee Member**, *plan, apply for funding, and develop curriculum for our [Data Science Summer Experience](#) for high school women in downtown Detroit*, [Girls Who Code at UM-DCMB](#).
University of Michigan

- 2009-present **Live Sound Engineer**, *for various churches and non-profit organizations*.
- Set up, maintain, repair, and operate front of house, monitor, and recording systems during sound checks, rehearsals, services, and concerts.
 - Train new sound techs in the art and science of live sound.

Teaching Experience

- 2019-present **Software Carpentry instructor**, *The Carpentries*
- 01-02 July 2019. [Workshop](#) teaching the Unix shell, version control with Git, and R programming. [U-M Software Carpentry](#)
- 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**, *taught binary numbers with Ozobots at FEMMES capstone event for middle school students*, [Females Excelling More in Math, Engineering, & Science](#).
University of Michigan
- Jan-May 2019 **Capstone project mentor**, *guided high school women through a data science project and presentation*, [Girls Who Code at UM-DCMB](#).
University of Michigan
- 2018-present **Software Carpentry helper**, *The Carpentries*
- 22-23 May 2019. [Workshop](#) teaching the Unix shell, version control with Git, and Python programming. [U-M Software Carpentry](#)
 - 01 Mar 2019. [Workshop](#) teaching the Unix shell, version control with Git, and Python programming. [U-M Software Carpentry](#)
 - 17-18 Dec 2018. [Workshop](#) teaching the Unix shell, R programming, and version control with Git. [U-M Software Carpentry](#)
- 2012-2017 **Tutor**, *for high school and college students in Biology, Calculus, Chemistry, Computer Science, and Bioinformatics*.