

# Kelly L. Sovacool

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🖥 [sovacool.dev](http://sovacool.dev)

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🐦 [kelly-sovacool](https://twitter.com/kelly-sovacool)

🌐 [kelly-sovacool](https://www.github.com/kelly-sovacool)

## 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 Researcher**, *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

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.

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## 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

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## 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 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.

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## Teaching Experience

- 2018-present **Software Carpentry instructor**, [U-M Software Carpentry](#), [The Carpentries](#)
  - 01 Aug 2019. Became a [certified](#) Software Carpentry instructor.
  - 01-02 July 2019. [Workshop](#) instructor teaching the Unix shell, Git, and R.
  - 03-04 June 2019. Completed the Software Carpentry instructor training course.
  - 22-23 May 2019. [Workshop](#) helper teaching the Unix shell, Git, and Python.
  - 01 Mar 2019. [Workshop](#) helper teaching the Unix shell, Git, and Python.
  - 17-18 Dec 2018. [Workshop](#) helper teaching the Unix shell, R, and Git.
- 15-19 July 2019 **Facilitator & Mentor**, *taught introductory Python programming and data science to high school women during the [Data Science Summer Experience](#), [Girls Who Code at UM-DCMB](#)*.  
Detroit, MI

- 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 at our weekly club*, [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*.

## 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 O'Hara
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky