

# Kelly L. Sovacool

✉ [sovacool@umich.edu](mailto:sovacool@umich.edu)

🖱 [sovacool.dev](http://sovacool.dev)

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

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

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

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## 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 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**, *Data Analysis Networking Group*,  
University of Michigan, [um-dang.github.io](https://um-dang.github.io)
- Organize monthly meetings & a one-day symposium for researchers to sharpen their data analysis skills.
  - Funded by a Rackham Interdisciplinary Workshop grant.
- 2018-present **Executive Committee Member**, *Girls Who Code at UM-DCMB*,  
University of Michigan, [github.com/gwc-dcmb](https://github.com/gwc-dcmb)
- Plan, apply for funding, develop curriculum, & facilitate collaborative development of our resources to teach introductory programming & data science to high school women.
- 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*, [umswc.github.io](https://umswc.github.io)
- 01-02 July 2019. Workshop instructor teaching the Unix shell, Git, and R.
  - 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.
- 2019-2020 **Facilitator & Capstone Project Mentor**, *Girls Who Code at UM-DCMB*,  
Weekly GWC Club for high school women, University of Michigan
- 15-19 July 2019 **Facilitator & Capstone Project Mentor**, *Girls Who Code at UM-DCMB*,  
Data Science Summer Experience, Detroit, MI
- 25 Apr 2019 **DNA Day Ambassador**, *MI DNA Day*, Epigenetics & scientific journeys,  
Ann Arbor, MI
- 20 Mar 2019 **Workshop helper**, *Graduate Society of Black Engineers and Scientists*,  
Data visualization with Python workshop, University of Michigan

- 16 Mar 2019 **Capstone Activity Leader**, *Females Excelling More in Math, Engineering, & Science*, Binary numbers through Ozobots with GWC at UM-DCMB, University of Michigan
- Jan-May 2019 **Capstone Project Mentor**, *Girls Who Code at UM-DCMB*, Weekly GWC Club for high school women, University of Michigan
- 2012-2018 **Tutor**, *freelance*, for high school and college students in Biology, Calculus, Chemistry, Computer Science, and Bioinformatics.

## Presentations

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

## Professional Development

- 03-04 Jun 2019 **Software Carpentry Instructor Training**, *The Carpentries*  
University of Michigan
- 01-05 May 2019 **PyCon Education Summit & Conference**, *The PSF*  
Cleveland, OH
- 24-26 Apr 2019 **MICROBIOL 612.2**, *Riffomonas minimalR workshop*  
University of Michigan