

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 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.

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

Service

- 2019-present **Graduate Student Coordinator**, *Data Analysis Networking Group*,
University of Michigan, 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
- 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.

Teaching Experience

- 2018-present **Software Carpentry instructor**, *U-M Software Carpentry*, 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