Suzie L. Hoops

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EDUCATION

Doctor of Philosophy, Computer Science (GPA 4.0)   **Expected 2024**
Master of Science, Computer Science (GPA 4.0)   **Feb 2023**
University of Minnesota-Twin Cities   *Minneapolis, MN*

Bachelor of Arts, Mathematics (GPA 3.57)   **May 2017**
St. Olaf College   *Northfield, MN*

RESEARCH AND WORK EXPERIENCE

Graduate Research Assistant, Advisor: Dan Knights   **Sep 2020-Present**
University of Minnesota-Twin Cities, Computer Science & Engineering   *Minneapolis, MN*
- Directing microbiome analysis for an infant gut study collaboration with CHOP totaling 3,500 sequenced samples.
- Combined DNA sequence softwares into a novel pipeline for tracking engraftment of microbes after fecal transplant.
- Diagnosed dimensionality reduction anomalies for multivariate datasets; produced a novel solution in R and Python.
- Advised 5 undergraduate researchers, and teaching assistant for courses in genomics, machine learning, and Python.

Data Scientist / Researcher 2, Knights Lab   **Sep 2018-Aug 2020**
University of Minnesota-Twin Cities, Computer Science & Engineering   *Minneapolis, MN*
- Developed statistical workflows in R and Python for disseminating gut microbiome findings in longitudinal studies.
- Collaborating with interdisciplinary teams of physicians, clinical researchers, community members, and scientists.

Fulbright Student   **Sep 2017-June 2018**
Johannes Kepler Universität, Computer Sciences   *Linz, Austria*
- Visualized GitHub provenance as a graph using D3.js, advised by Professor Marc Streit at JKU Linz.
- Taught English in a local secondary school and completed courses for the Technical Mathematics M.S. at JKU LInz.

Data Science Intern   **May 2017-Aug 2017**
CoreBiome (now Diversigen)   *Saint Paul, MN*
- Implemented custom microbiome analysis software (Python, D3.js) on AWS using the EC2 cloud and S3 storage.

SKILLS

Programming languages: Python, R, SQL, C++, MATLAB, LaTeX, D3.js, HTML/CSS
Data Handling: AWS storage (S3), AWS computing (EC2), Relational databases (RedCAP), HPC cluster computing
Data Analysis: Hypothesis testing, Machine Learning, Bayesian statistics, Deep Learning (PyTorch, TensorFlow)
Languages: English (native), German (conversational), American Sign Language (beginner)

LEADERSHIP & OUTREACH

Board Member, *Fulbright Association of Minnesota*   **July 2019-July 2022**
Director of Finance, *Council of Graduate Students, University of Minnesota-Twin Cities*   **July 2020-July 2021**
President, *Habitat for Humanity, St. Olaf College*   **Sep 2015-May 2017**
Captain, *Women's Cross Country and Track & Field, St. Olaf College*   **Sep 2015-May 2017**

AWARDS

Honorable Mention, *NSF Graduate Research Fellowship Program* (2021)
Fulbright Combined Award, *Fulbright Association* (2017)
Program Director of the Year, *St. Olaf College Leadership Awards* (2016)