

Alex Morehead

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Education

University of Missouri

Columbia, MO

Ph.D. Computer Science | Department of Electrical Engineering & Computer Science

August 2020 – May 2025

- Research Interests: **Machine Learning, Bioinformatics, & Computer Vision**
- Relevant Coursework: Machine Learning, Computational Systems Biology, Algorithms, Natural Language Processing

Missouri Western State University

Saint Joseph, MO

B.S. Computer Science, Minor in Mathematics | Department of Computer Science, Mathematics, & Physics

August 2016 – May 2020

- **Cumulative GPA: 4.0 / 4.0; Major GPA: 4.0 / 4.0; Summa Cum Laude**; General Studies Honors Program

Work Experience

University of Missouri

Columbia, MO

Graduate Research Assistant | [Bioinformatics & Machine Learning \(BML\) Lab](#)

August 2020 – Present

- Research and develop novel geometric deep learning techniques applicable to computational biology and computer vision
- Test and design new equivariant neural networks for learning biomolecular structures
- Organize and conduct large-scale deep learning experiments in a distributed setting
- Review and annotate the latest literature on machine learning

Altec, Inc.

Columbia, MO

Data Science Intern | Data Science Team

January 2021 – Present

- Design and develop end-to-end machine learning pipelines in AWS using Python and R
- Collaborate closely with business stakeholders and analysts to understand data and the problem needing to be solved
- Work with other development teams to integrate models into user applications

Indiana University–Purdue University Indianapolis

Indianapolis, IN

Undergraduate Research Assistant | Department of Computer & Information Science

June 2019 – August 2019

- Effectively contributed to a GitHub [repository](#) for the department's NSF-funded 2019 Data Science REU
- Authored an SMS alert pipeline using TensorFlow Lite models on Raspberry Pi microcomputers
- Precisely recorded findings of the gunshot sound detection project in a LaTeX manuscript

Publications

- Owen Koucky, Jacob Wagner, Sofia Aguilera, Benjamin Bashaw, Queena Chen, Anthony Eckdahl, Elise Edman, Paul Gomez, Nick Hanlan, Nick Kempf, Devin Mattoon, Sam McKlin, Christopher Mazariegos, **Alex Morehead**, Shi Qing Ong, Andy Peterson, Maria Rojas, Kyla Roland, Kaitlyn Schildknecht, Haley Seligmann, Kaden Slater, Ali Tauchen, Raechel Tittor, Tatianna Travieso, Dannie Urban, Caroline Willis, John Zhou, Nicole L. Snyder, Laurie J. Heyer, Jeffrey L. Poet, Todd T. Eckdahlb, A. Malcolm Campbell. *Synthetic Biology Bicistronic Designs Support Gene Expression Equally Well in vitro and in vivo*. [In press](#) at the American Journal of Undergraduate Research (AJUR).

- **Alex Morehead**, Lauren Ogden, Gabe Magee, Ryan Hosler, Bruce White, and George Mohler. *Low Cost Gunshot Detection using Deep Learning on the Raspberry Pi*. [Published](#) with the 2019 IEEE International Conference on Big Data.

Skills & Interests

- Languages/technologies: Proficient in Python, R, Java, & C; familiar with C#, C++, & SQL, Previously used PyTorch, TensorFlow, NumPy, Pandas, & Jupyter. Experienced in Machine Learning, Research & Development, Git, Unix/Linux, & Design Patterns.
- Finished both the full & half marathons in Kansas City.
- Proficient in written and spoken Chinese and Japanese.

Fellowships, Honors, & Awards

- **Dean's Engineering Excellence Fellowship** – Won first-year fellowship from MU *August 2020*
- **James W. and Joan M. O'Neill Graduate Fellowship in Engineering** – Won first-year fellowship from MU *August 2020*
- **Outstanding Graduating Student** – 1st ranked undergraduate computer science student at Missouri Western *May 2020*
- **President's Honor Roll** – Awarded certificate for maintaining a 4.0 cumulative GPA at Missouri Western *May 2020*
- **Floyd Tesmer/Strayer University Prize in Computer Science and Engineering** – 1st place undergraduate poster *April 2019*
- **Alpha Chi Region IV Scholarship** – Won \$500 prize for demonstrating thoughtful computer science scholarship *April 2019*