

Alex Morehead

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Education

University of Missouri

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

Columbia, MO

August 2020 – May 2025

- Research Interests: **Machine Learning, Bioinformatics, & Computer Vision**

Missouri Western State University

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

Saint Joseph, MO

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

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

Columbia, MO

August 2020 – Present

- Research machine learning and its applications in bioinformatics and computer vision.

Altec, Inc.

Software Development Intern | Service Team

Saint Joseph, MO

August 2018 – Present

- Reduce miscommunication between service centers globally by engineering new Angular web applications
- Maintain the testing environments of in-house applications by writing LINQ queries and tuning up test databases
- Build secure back end APIs with the Spring framework in an agile development setting

Indiana University–Purdue University Indianapolis

Undergraduate Research Assistant | Department of Computer & Information Science

Indianapolis, IN

June 2019 – August 2019

- Effectively contributed to a private 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

Missouri Western State University

Undergraduate Research Assistant | Department of Computer Science, Mathematics, & Physics

Saint Joseph, MO

May 2018 – August 2018

- Successfully developed and maintained a [GitHub repository](#) of mathematical applications to synthetic biology
- Produced the open-source desktop application [Variant Sampler](#) for modeling the sample space of *in vitro* experiments
- Accurately documented all source code generated for the department's NSF-funded 2018 summer research project

Selected Independent Projects

Machine Learning Fundamentals

May 2018 – July 2018

- Assembled a self-educational series of [open-source](#) Python scripts which led to a revised understanding of machine learning
- Researched and solved classic and contemporary optimization problems in artificial intelligence
- Promoted peers and teachers' awareness of data science's ability to impact everyday living

Cense

September 2016 – April 2018

- Devised an [open-source](#) desktop application for facilitating sensical personal finance habits
- Implemented JavaFX to create a simple and intuitive graphical user interface
- Programmed an alternative Swing version as well as a debugger for feature testing and troubleshooting

Eagle Scout Project

January 2015 – June 2015

- Led a community service project for advancement to the rank of Eagle Scout in the Boy Scouts of America
- Upgraded local church's youth ministry lounge with a new media station as well as new furniture and artwork
- Utilized Raspberry Pi Model B's running XBMC and Raspbian to power the new media station for the youth lounge

Skills & Interests

- Languages/technologies: Proficient in Java, Python, C; familiar with R, C#, C++, SQL, HTML, CSS. Previously used Angular, Django, NumPy, & Jupyter. Experienced with Git, Unix/Linux, Spring, Unit Testing, Web Services, Design Patterns, Deployment, & Security.
- Finished both the full & half marathons in Kansas City.
- Proficient in written and spoken Chinese and Japanese.

Honors & Awards

- **Outstanding Graduating Student** – 1st ranked undergraduate computer science student 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** – Received \$500 for demonstrating thoughtful computer science scholarship *April 2019*