Michael T. Moen

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EDUCATION

M.S. in Applied Statistics, The University of Alabama, *Tuscaloosa, AL* - 3.67/4.00 GPA ⟶ May 2026

B.S. in Computer Science & Mathematics, The University of Alabama, *Tuscaloosa, AL* - 3.89/4.00 GPA ⟶ May 2026

EXPERIENCE

Research Computing Student Lead, The University of Alabama Libraries, *Tuscaloosa, AL* ⟶ January 2023 - Present
- Provide software development and data analysis support; assist with coding in Python, C++, R, Java, HTML, CSS, and more.
- Publish 20+ tutorials on accessing and analyzing REST APIs using Python and R, managing and reviewing GitHub Pages site content.
- Design and teach workshops covering programming, data analysis, and machine learning using Python, R, and scikit-learn.
- Built a full-stack web application using a Python Flask backend and a JavaScript, HTML, and CSS frontend for retrieving CEO pay data.

MLOps Engineer Intern, Veterans United Home Loans, *Remote* ⟶ May 2025 - Present
- Use Python FastAPI to develop and maintain tools for machine learning (ML) model deployment and development.
- Develop and maintain scalable ML infrastructure using Docker, Kubernetes, SQLAlchemy, Azure, and Grafana.

Web Developer Intern, Bowfin Tech, *Remote* ⟶ January 2025 - May 2025
- Built a client's website using WordPress and Elementor, implementing responsive web design for mobile and desktop users.
- Implemented user tracking by integrating Google Tag Manager and Google Analytics with Google Ads and Meta Pixel.

Cyber Software Engineer Intern, Northrop Grumman, *San Antonio, TX* ⟶ June 2024 - August 2024
- Automated the installation and updating of applications on 20+ Windows workstations on an air-gapped network by writing an Ansible playbook and PowerShell script, saving roughly 90 hours of manual updates per month.
- Drafted a white paper for a Docker infrastructure to securely process files using multiple containers, reducing data transfer costs.
- Configured a persistent SMB mount with Kerberos authentication in Red Hat Enterprise Linux.
- Gained experience with Agile practices by participating in scrum meetings, sprint planning, and sprint retrospectives.

Software Engineer Intern, National Geospatial-Intelligence Agency, *St. Louis, MO* ⟶ June 2023 - August 2023
- Cleaned Jira backlog of 2400+ tickets using Python, eliminating 100+ duplicate items and creating visualizations of the data with matplotlib.
- Redesigned a Confluence website, creating a more user-friendly design and adding the ability to search and view files in browser.
- Automated an accounting procedure using Microsoft Excel, saving about 5 hours of manual work per month.

PROJECTS

Personal Website | *React, HTML, CSS, Bootstrap* ⟶ mtmoen.com
- Designed a website using React, HTML, CSS, and Bootstrap to create a responsive, professional, and mobile-friendly interface.

Air Quality vs. Life Expectancy Analysis | *R, Python (Pandas)*
- Analyzed U.S. county-level data to evaluate the relationship between air quality indicators and cause-specific mortality rates.
- Joined and cleaned datasets from multiple sources using Python, performing exploratory data analysis and model diagnostics in R.
- Built multiple linear regression models with variable selection and multicollinearity checks using R to identify key pollutants.

Penny: An AI Chatbot Assistant for Saving Money | *Python (Flask, Plotly)*
- Created an application using the OpenAI API and Python Flask to advise customers how to reduce spending based on their transactions.
- Won 1st place out of ten teams in the Fintech category at the UA Innovate Hackathon, winning the $1000 grand prize.

CashCourse: A Financial Literacy Education Tool | *Python (FastAPI, Plotly)*
- Used Python FastAPI endpoints to create Plotly figures, analyze documents, and customize educational materials with the OpenAI API.

Data Structures Library | *C++*
- Implemented circular dynamic arrays, red-black trees, and Fibonacci heaps in C++ using templates for compatibility with various classes.

SKILLS

Languages	Python, C++, R, JavaScript, HTML, CSS, SQL, LaTeX
Frameworks	FastAPI, scikit-learn, React, Flask, Bootstrap
Tools	Git, GitHub, Linux, Jira, Confluence, WordPress, Microsoft Office