Michael Stich
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For more information about my education, work experience, and projects, visit my portfolio website at www.mcstich.com

EDUCATION

Master of Science in Data Science – University of Colorado Boulder **Graduation Date – May 2026**
GPA: 4.0/4.0 | Pre-Graduate Accelerated Degree Program
Bachelor of Science in Computer Science – University of Colorado Boulder **Graduation Date – May 2025**
Cumulative GPA: 3.8/4.0 | **Technical GPA:** 3.9/4.0 | Dean's List Student

RECENT WORK EXPERIENCE

Full Stack Software Developer Intern **June 2023 – August 2023**
National Aeronautics and Space Administration (NASA) Glenn Research Center | Cleveland, Ohio

- Created a web-based graphical user interface to significantly aid in the development of a prototype lunar power grid infrastructure
- Developed features in the GUI to control and display data from the inverter module of the prototype
- Implemented a new fast frequency measurement algorithm in VHDL for the prototype's FPGA clock

NPSS Library Software Developer Intern **January 2023 – May 2023**
National Aeronautics and Space Administration (NASA) Glenn Research Center | Remote

- Refactored the official NASA Numerical Propulsion System Simulation (NPSS) Power System Library resulting in crucial performance and reliability improvements to the library
- Developed unit tests for every electrical component in the NPSS Power System Library
- Developed a GitHub self-hosted runner that can automate any NPSS development project

PROJECTS

Wheel Wizard Group Project **November 2023 – December 2023**

- Led a team of five to develop a used-car website for browsing, posting, and purchasing used cars
- Utilized the MERN tech stack, agile development methodology, and external used-car website APIs

Speech-to-Text Translator Project **August 2022 – December 2022**

- Developed a real-time deep learning-based speech-to-text translator capable of accurately transcribing spoken language into text

University of Colorado Engineering Projects Expo **February 2022 – April 2022**

- Led a team of four to build a 17th-century time escapement for a Physics Professor's visual teaching aid
- Designed and constructed the time escapement within a 10-week window and a $250 budget

C++ Console-Based Video Game Project **August 2018 – November 2018**

- Developed a 2D video game entirely in C++ that merged the gameplay mechanics of "Space Invaders" with the aesthetics from the "DOOM" video game franchise
- Integrated complex data structures and algorithms to seamlessly process, store, and render user data

SKILLS

Programming Languages: x86 Assembly, C/C++, C#, Python, Java, JavaScript, TypeScript, SQL, VHDL
Front End Development: HTML, CSS, Tailwind CSS, React, Angular, Vite, Client side GraphQL, Axios
Back End Development: Node.js w/Express, Django, Ruby on Rails, REST APIs, Server side GraphQL, PostgreSQL
Algorithms: Dijkstra's, BFS, DFS, A*, Prim's, Kruskal's, Huffman Encoding, Ford-Fulkerson, Merge Sort, Quick Sort, SHA-256 Hashing, Minimax, Markov Decision Process, Gradient Decent, Backpropagation, RNN
Data Structures: Binary Search Trees, Hash Tables, Red and Black Trees, Graphs, Heaps, Linked Lists, MSTs
Math: Calculus, Statistics, Linear Algebra, Boolean Algebra, Digital Logic, Time Complexity, Space Complexity
Additional Skills: Leadership, Communication, Git, GitHub, GitLab, DevOps, Cryptography, Docker, Docker Hub