Michael Stich
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Check out my portfolio website for more info about me: https://mcstich.com

EDUCATION

Bachelor of Science in Computer Science — **Graduation Date – December 2024**
University of Colorado Boulder — Cumulative GPA: 3.8/4.0 | Technical GPA: 3.9/4.0

RECENT WORK EXPERIENCE

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

- Created a graphical user interface using React to efficiently manage and control a prototype lunar power grid, which resulted in a substantial reduction of the prototype's development time
- Designed, modeled, and 3D printed essential components for the prototype, ensuring precise fit and functionality, which expedited the prototype's assembly process
- Implemented a new fast frequency measurement algorithm in VHDL for the prototype's FPGA clock

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

- Refactored the official NASA Numerical Propulsion System Simulation (NPSS) Power System Library, resulting in significant performance and reliability enhancements crucial to the library's functionality
- Engineered new electrical components into the library, ensuring precise simulation of their intended functionality
- Created and implemented unit tests for all electrical components within the library, ensuring robustness and stability of the software
- Designed and deployed a GitHub self-hosted runner capable of automating NPSS development projects, streamlining workflows and enhancing productivity for development teams

RECENT MAJOR PROJECTS

HackCU Hackathon — **March 2024**

- Spearheaded the development of a real-time satellite tracking web app, employing technologies like Three.js to visualize satellite movement on a 3D model of Earth
- Collaborated with a team of four to conceptualize, design, and implement the entire web app within the 24-hour timeframe of the competition

Wheel Wizard Group Project — **October 2023 – December 2023**

- Led the development of a comprehensive used-car website using the MERN tech stack, facilitating seamless browsing, posting and purchasing of pre-owned vehicles

CU Boulder 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
- Successfully delivered the escapement within a strict 10-week timeframe and limited budget of $250

SKILLS

Programming Languages: x86 Assembly, C/C++, C#, Python, Java, JavaScript, TypeScript, SQL
Front End Development: HTML, CSS, React, Angular, Vue.js, Axios
Back End Development: Node.js (with Express), Django, Ruby on Rails, REST APIs, GraphQL
Database Management: MySQL, PostgreSQL, MongoDB, Cassandra
Collaboration: Leadership, Communication, Git, GitHub, GitLab, DevOps, Agile Methodologies
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: Cryptography, Docker, Docker Hub, AWS, Azure, TensorFlow, PyTorch, Socket.io