Michael Stich

mcstich@outlook.com | https://linkedin.com/in/mcstich/ | https://github.com/stichmc

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 Software Engineer 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 Engineer 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
- Created and implemented unit tests for all electrical components within the library, ensuring the 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

Sat-Track – HackCU Hackathon — **March 2024**

https://mcstich.com/projects/hackcu-sattrack — A real-time satellite telemetry tracker

Anello — **December 2023 – Present**

https://mcstich.com/projects/anello — A messaging webapp with video conferencing capabilities

Speech-To-Text Translator — **August 2022 – December 2022**

https://mcstich.com/projects/speech-to-text — A deep learning-based speech-to-text translator

Time Escapement – CU Boulder Engineering Projects Expo — **February 2022 – April 2022**

https://mcstich.com/projects/time-escapement — A 17th-century time escapement

Beyond — **March 2021 – Present**

https://mcstich.com/projects/beyond — A 2D pixel adventure videogame made in Unity

C++ Console-Based Game — **August 2018 – November 2018**

https://mcstich.com/projects/doom — A 2D videogame inspired by Space Invaders and DOOM

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

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

Machine Learning: TensorFlow, PyTorch, Recurrent Neural Networks, Artificial Neural Networks

Additional Skills: Cryptography, Docker, Docker Hub, AWS, Azure, Socket.io