

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>

RECENT WORK EXPERIENCE

NASA – National Aeronautics and Space Administration

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, resulting in a substantial reduction of the prototype's development time
- Designed, modeled, and 3D printed essential components for the prototype, using CAD software, 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

NASA – National Aeronautics and Space Administration

January 2023 – May 2023

NPSS Library Software Engineer Intern

Glenn Research Center | Remote

- Refactored the NASA Numerical Propulsion System Simulation (NPSS) Power System Library, resulting in significant performance and reliability enhancements crucial to the library's functionality
- Implemented unit tests for all electrical components within the library, ensuring 100% robustness and stability of the software
- Designed a CI/CD pipeline to automate testing and deployment for NPSS Library projects, employing a GitHub self-hosted runner that utilizes a local NPSS environment hosted by NASA servers

SKILLS

Programming Languages: x86 Assembly, C/C++, C#, Python, Java, JavaScript, SQL

Front End Development: HTML, CSS, TypeScript, React, Angular, Vue.js, Axios

Back End Development: Node.js (with Express), Django, Ruby on Rails, REST APIs, GraphQL, Web Sockets

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 Descent, 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, SOLIDWORKS

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 web app 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

C++ Console-Based Game

August 2018 – November 2018

<https://mcstich.com/projects/doom>

A 2D video game inspired by Space Invaders and DOOM

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

Associate of Science in Mechanical Design

Graduation Date – May 2020