Thayer Hicks

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Technical Skills

Certifications: Azure Fundamentals, CI/CD with Jenkins
Languages: C/C++, Java, Python, Verilog, MIPS and x86 Assembly, JavaScript, HTML/CSS, SQL, MatLab
Frameworks/Libraries: Data Structures, Algorithms, Spring Boot, React, Node, REST API, Flask
Technologies: Azure, AWS Suite, Git, Jenkins CI/CD, Docker, Firebase, UNIX/Linux, MySQL, Oracle, PostgreSQL
Additional Skills: Debugging, defect tracking, database management, Agile development, Cloud, CPU architecture

Education

University of North Carolina at Chapel Hill Aug. 2021 - May 2026
M.S. in Computer Science, B.S. in Computer Science, B.A. in Music *Chapel Hill, NC*

- 4.0 GPA (M.S.), 3.9 GPA (B.S.)
- Graduate Teaching Assistant for COMP 581 - Introduction to Robotics (Fall 2025)
- Principal French Horn in the UNC Symphony Orchestra

Experience

Software Engineering Intern Jun. 2025 - Aug. 2025
Wells Fargo - Enterprise Functions Technology *Charlotte, NC*

- Engineered and deployed a device health dashboard monitoring trader systems tied to $5B+ in revenue
- Built a Flask backend with asynchronous, multi-threaded endpoints, improving request responsiveness
- Designed and implemented SQLAlchemy ORM models for a lightweight SQLite database
- Deployed the application using Red Hat OpenShift Container Platform

Software Engineering Intern Jun. 2024 - Aug. 2024
Wells Fargo - WIM Technology *Charlotte, NC*

- Developed a Spring Boot API for error logging, advancing an enterprise-wide observability initiative
- Integrated API with Splunk via SDK, enabling real-time error monitoring and faster incident resolution
- Designed Oracle SQL schemas using JPA, improving query reliability and backend development efficiency

Software Development Intern May 2023 - Aug. 2023
KendallTodd Inc. *Chapel Hill, NC*

- Modernized 16 mortgage calculators with a React frontend, replacing a 15-year-old codebase
- Implemented a serverless REST API with Node.js, AWS Lambda, and API Gateway, cutting infrastructure costs
- Architected cloud-based storage with AWS S3 and MySQL, ensuring secure and reliable data persistence

Research

UNC Computational Robotics Lab | *Real-Time DDS Paper Submitted to RTAS 2026* Sep. 2024 – Present

- Using ROS 2 to enable real-time communication with sensors
- Using Autoware and AWSIM with Unity to test autonomous driving scenarios
- Created Auto-Reach to facilitate the connection between two open source AV simulation stacks

UNC Brain Computer Interface Lab | *Paper Submission Planned for Summer 2026* Aug. 2025 – Present

- Developing a formally verified compiler translating Python into Verilog, enabling hardware-software co-design
- Exploring Processing-in-Memory hardware for Fast Fourier Transformations

Projects

Spectrum Webmail Assistant | *Data and spam management for Spectrum Webmail* Apr. 2025 - Sep. 2025

- Automated email management with Python and Selenium, deployed with Docker to reduce spam and manage data
- Trained custom ML ensemble models, providing 96% accuracy and 99% precision
- Built interactive tools for custom data labeling and NLP-driven text preprocessing

MIPS Emulator - Sound Module | *Contribution to an open-source MIPS emulator* Jun. 2024 - Sep. 2024

- Extended a multi-threaded Java-based MIPS emulator with sound support for hundreds of student users
- Identified and reported critical bugs in the Java JFugue library by leveraging music expertise
- Gained experience contributing to an open-source project