Abiye Berhanu

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EDUCATION

University of North Carolina at Chapel Hill   **Chapel Hill, North Carolina**

B.S. in Computer Science | B.S. in Statistics and Analytics | Minor in Data Science   *Graduation: May 2026*

GPA: 4.0

Related Coursework: Data Structures & Algorithms, Algorithms and Analysis, Discrete Structures, Systems Fundamentals, Foundations of Programming, Computer Organization, Intro to Optimization, Methods of Data Analysis, Intro to Probability

SKILLS

Programming Languages: Python, Java, JavaScript, HTML/CSS, C++, R, SQL

Technologies: React, Angular, Node.js, Electron, AutoCAD, Git, Matplotlib, Firebase, TensorFlow, Scikit-learn, Azure

EXPERIENCE

Microsoft   May 2025 - Aug 2025
Software Engineer Intern   *Atlanta, Georgia*
- Built a web application and integrated MCP tools into GitHub Copilot to analyze latent structural patterns in Azure's Galaxy knowledge graphs.
- Streamlined engineers' ability to review graph payloads, reducing manual overhead and improving Copilot's reasoning over complex inputs.
- Applied FP-Growth and Apriori rule mining to uncover architectural patterns, and delivered interactive React visualizations for debugging and analysis.

Phantiel Lab   Apr 2024 - Present
Full Stack Software Engineer   *Chapel Hill, North Carolina*
- Designed and implemented a GUI for the PlotGardener R package, improving usability for genomic data analysis.
- Enabled cross-platform capability and support for large local datasets, enhancing accessibility for researchers.
- Collaborated with the research team to translate experimental needs into technical features.

CS + Social Good   Aug 2023 - Present
Software Engineer   *Chapel Hill, North Carolina*
- Contributed to web projects supporting local nonprofits, helping organizations adopt technology solutions to achieve their goals.
- Designed accessible platforms using modern web frameworks to enhance community outreach and project effectiveness.
- Participated in team sprints and coordinated with peers, developing leadership, initiative, and communication skills.

North Carolina Central University   Oct 2019 - Mar 2020
Fab Lab Intern   *Durham, North Carolina*
- Built security solutions on Raspberry Pi hardware for prototype applications.
- Fabricated physical prototypes (phone case, boomerangs, etched designs) using laser cutting and CAD.
- Assembled and tested breadboard circuits with transistors and LEDs.

PROJECTS

AI Study Buddy
- Developed an AI-powered Study Buddy to generate flashcards, practice questions, and analyze notes tailored to UNC courses
- Implemented frontend using Angular, HTML/CSS, and TypeScript; built backend APIs using FastAPI and utilized OpenAI API to generate study content
- Integrated TA/instructor feedback and deployed on CSXL, UNC's largest CS undergraduate student platform

Premier League Match Predictor
- Designed a machine learning model in Python/Pandas to predict match outcomes based on historical datasets.
- Implemented feature engineering and trained models to evaluate predictive accuracy on test data.