Makayla Mckinney
www.makmckinney.com | mmckin22@vols.utk.edu | www.linkedin.com/in/makayla-mckinney-b45129208

Education:

B.S.E, Computer Engineering Expected Graduation: May 2025
University of Tennessee Knoxville, Knoxville, TN
Relevant Coursework: Embedded Systems Design, Introduction to Machine Learning, Introduction to Cybersecurity, Digital Systems Design, Signals and Systems, Electronic Devices

B.S.A, Modern Foreign Language and Literatures (German) Expected Graduation: May 2025
University of Tennessee Knoxville, Knoxville, TN
Relevant Coursework: Advanced German Language IV, Multilingualism in German Speaking Europe, Cinematic Cities: Berlin

Professional Experience:

Electric Power Research Institute, Knoxville, TN May 2023 – September 2024
Student Software Developer/Integrator

- Developed a full-stack web application to assist clients in understanding industrial power quality issues. Reduced user clicks and wait-time.
- Key Technologies: SQL (Database Optimization, Data Manipulation, Report Generation), C# (Scalable Backend Systems, API Integration), Vue.js (Dynamic user-friendly interfaces)
- Internal Memberships: Watts UP Toastmasters, Technical Women's Network

Arnhem Postal History, George Mason University, Fairfax, VA September 2023 – April 2024
Data Entry Keyer

- Transcribed historical postal documents from German-Occupied Netherlands into Excel database for backend of Digital Humanities Web Application Project.
- Key Skills: Microsoft Excel, Dutch Language, German Language, Database Keyword Optimization

Student Success Center, University of Tennessee, Knoxville, TN November 2022 – Present
UT Peer Learning Assistant (Tutor)

- Tutors in math, engineering, and German Language, ensuring success in supportive learning environment.
- Courses Offered: Calculus III (Math 241), Circuits I (ECE 201), Data Structures and Algorithms (CS 202), Advanced German Language IV (German 412), Introduction to Statistics (Statistics 201)

Projects:

Foodify: Free Food Finder November 2024

- Developed fullstack website to help University of Tennessee students locate and share free food events.
- Used NodeJS, MongoDB, and VueJS

FPGA Aquaponic Tank (University of Tennessee) November 2023

- Led team to develop aquaponics system using Artic7 Basys3 FPGA to circulate water consistently for plant care, using VHDL for motor control and data storage.

MATLAB Voice Recognition Model (University of Tennessee) May 2024

- Developed voice recognition model using convolution and kernels, achieving 44.46% accuracy by processing audio files and lookup table.

Extracurricular Activities:

Lunabotics (University of Tennessee) July 2021 – September 2023
Electrical Design Lead

- Led a team of 9 interdisciplinary engineering students to design and develop the hardware for a lunar rover's mining mechanism, drive train, and autonomous onboard computer for NASA's Robotic Mining Competition (RMC).

Technical Skills:

Programming Languages: Java, C++, C, C#, SQL, MATLAB, ARM Cortex Assembly, VHDL, Scripting (Bash/Shell/PowerShell)
Web Development: HTML, CSS, JavaScript, VueJS, EmberJS, NodeJS, AngularJS, API Integration, REST APIs
Database Design: SQL, Database Optimization, Data Manipulation, Python Packages (NumPy, Sci-learn, Pandas, TensorFlow)
Tools: Fusion360, AutoCAD, OnShape, JMP, SPICE, KEIL, Arduino, GitHub, Microsoft Azure