

Kenneth Lance Howard

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Education

North Carolina A & T State University, B.S. in Computer Science - Magna Cum Laude North Carolina A & T State University, M.S. in Computer Science - AI and DS focus Fayetteville Technical Community College, Associate of Science Greensboro, NC | May 2025 Greensboro, NC | Exp. Dec 2026 Fayetteville, NC | May 2021

Technical Skills & Software Proficiencies

Proficient: C++, Java, Python, HTML, CSS, JavaScript, React, VS Code, NetBeans, Eclipse, SQL, Swift, Node.js, Jenkins, Linux, LLMs, RAG, various APIs/microservices, PyCharm, PyTorch

Skills & Interests: Machine Learning, Frontend, Data Structures, Algorithms, OS, Services, Flutter, Networking, Git, Digital Media, SQL, Backend, AI, Data Science, Scripting, Kubernetes, R, Linux, Feature Engineering, Fine-Tuning, Deep Learning

Work Experience

Sandia National Laboratories

Computer Science R&D

Albuquerque, NM | May 2024 - Present

- Conducting **R&D** initiatives to enhance national security, focusing on advanced algorithms for data analysis and system resilience.
- Integrating LLMs, RAG (Retrieval-Augmented Generation) Feature engineering, Fine-Tuning and image processing models, with full-stack development to innovate secure AI-driven software systems.
- Collaborating with **cross-functional teams** to design, develop, and deploy efficient software solutions tailored to operational needs.

Graduate Research in AI/ML

AI Full-Stack Developer - NCAT Research Project

Greensboro, NC | August 2024 - Present

- Built an AI assistant for students and faculty to query lesson plans, parse notes, and auto-generate study content.
- Developed full-stack features using **Streamlit**, **LangChain**, and **Docker**, integrating **LLMs**, **RAG**, and multi-format file support.
- Led backend integration and containerized deployment for scalable, secure performance.

Projects

• Full Stack Application Development:

Completed large-scale **Java projects** with **front-end/back-end** design using **Eclipse**, **OOP**, and **Jenkins** for database management, **React**, **React Native**, and **Python** applications with API integrations, **scripts**, and **Web scraping**.

- Designed architecture, implemented features, integrated **RESTful APIs**, ensured real-time data sync and more.

• Capital One Custom AI Assistance Hackathon:

Developed an AI assistant that secured 1st place. Leveraged **LLMs**, frameworks, and software engineering principles. Implemented contextual responses, data retention, and structured insights with **Streamlit** and **Docker**.

- Managed AI model development, testing, and deployment with **Docker**, refining the contextual response system.

• Deutsche Bank Hackathon - Sentiment Analysis with AI:

Built a real-time sentiment analysis pipeline to classify financial news and social media data.

 Trained advanced NLP models for high-accuracy sentiment detection; integrated results into a live dashboard for immediate insights.

• Sound Application for Hearing Loss (Flutter, Spotify AI):

Created a cross-platform mobile app that evaluates hearing capability and suggests curated music playlists using Spotify's API.

- Built the front-end in **Flutter** for a user-friendly interface; integrated Spotify AI APIs for personalized recommendations.
- AI Data Visualization Platform, J.P. Morgan Data For Good Hackathon (React, Tailwind, OpenAI API, Python): Developed a full-stack web app that visualized NBA player stats and mental health trends from uploaded CSV data using LLMs.
 - Engineered front-end with **React** and **Tailwind** to support real-time user input and results display.
 - Integrated **OpenAI API** with custom Python backend to generate charts and summaries from natural language prompts.
 - Connected CSV upload and AI query pipeline to deliver contextual insights via button-triggered interactions.

Extracurriculars & Awards

• Member, (Association of Computing Machinery) ACM, NSBE & SHPE at NC A&T

Fall 2024-Spring 2024

• Gen AI Certified with Dell; Placed in Deutsche Bank Hackathon & more

Fall 2024

Fall 2023-Present

 \bullet $\,$ Microsoft Mentorship Program with a focus in Copilot, CS and personal development

2021

• Member, NCSU AI Club

Fall 2021-2022

• NC A&T Hackathon: Multiple 1st Places with Chevron, Capital One & more

Fall 2023-Fall 2024

• Computer Science Course TA, NC A&T, Led a python boot camp segment for students

Spring 2024