Kenneth Lance Howard

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Education

North Carolina AT State University, B.S. in Computer Science — **GPA: 3.72/4.0**	**Greensboro, NC | Expected May 2025**
Fayetteville Technical Community College, Associate of Science	**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

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

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) models, and **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.

Undergraduate Research in AI/ML
AI Full-Stack Developer – NCAT Research Project   **Greensboro, NC \| August 2024 – May 2025**

- 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 2023–2025**
- **Gen AI Certified with Dell**; Placed in **Deutsche Bank Hackathon**	
- **Dean's List** Computer Science Honors Award NC A&T	**Spring 2024**
- Member, **NCSU AI Club**	**Fall 2021–2022**
- **NC A&T Hackathon: Multiple 1st Places with Chevron, Capital One and more**	**(Fall 2023, Spring 2023, Fall 2024)**
- Computer Science Course TA, NC A&T	**Spring 2024**