

# Abdikafar Omar

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## EDUCATION

### Duke University

May 2027

*Bachelor of Science in Computer Science Concentration in Ai and Machine Learning*

*Durham, NC*

- Relevant Coursework: Data Structures & Algorithms, Discrete Mathematics and Proofs, Computer Architecture, Statistical Data Science, Artificial Intelligence and machine Learning(Spring 2026), Introduction to Databases(Spring 2026)

## TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript, R, SQL

Frameworks/Tools: React, FastAPI, LangChain, Streamlit, Node.js, Docker, Git, REST APIs, Linux

Machine Learning & Data: Pandas, NumPy, scikit-learn, ChromaDB, NLTK, Matplotlib, PyTorch (beginner), OpenAI API

Concepts: Object-Oriented Programming, Web Development, Data Visualization, Machine Learning Pipelines, Database Design, Agile Workflow

## RELEVANT EXPERIENCE

### Software Engineering Intern

May 2024 – Aug 2024

*Duke Office of Information Technology (Code+ Program)*

*Durham, NC*

- Developed a full-stack research discovery web application connecting 8,000+ faculty to funding and collaboration opportunities.
- Optimized data retrieval using LangChain and ChromaDB, improving match precision by 32% and reducing query latency by 40%.
- Built responsive React UI and accessibility features that increased daily active users by 18%.
- Collaborated in Agile sprints with engineers and researchers, contributing 4,000+ lines of production-ready code.

### Superintendent Intern

Jan 2023 – May 2023

*KIPP Columbus*

*Columbus, OH*

- Streamlined district operations and academic enrichment programs impacting 1,200+ students across 4 campuses.
- Designed data-driven surveys that improved student engagement and attendance metrics by 15%.
- Facilitated communication between administrators, reducing turnaround time for inter-departmental requests by 25%.

## PROJECTS

### EcoMind Sustainability Analytics Dashboard

*Python, Streamlit, Plotly, Pandas*

- Built an interactive visualization dashboard analyzing sustainability data across 100+ countries.
- Implemented real-time analytics with Plotly; reduced dataset load times by 60%.
- Designed an intuitive UI to make environmental insights accessible to educators and policymakers.

### Black Box Auditor AI Transparency Tool

*React, FastAPI, OpenAI API*

- Developed a solo-built AI auditing platform that visualizes bias and output drift across large language models.
- Engineered a comparative evaluation framework that reduced manual review time by 50%.
- Designed the full-stack architecture, integrating OpenAI APIs for model interpretability and visualization.

### Scholars@Duke Opportunities Finder

*Python, LangChain, ChromaDB, NLTK, LLMs*

- Developed an AI-powered recommender system matching Duke researchers to funding sources.
- Automated metadata extraction and embedding search, cutting manual data curation by 60%.
- Collaborated with engineers and researchers to integrate machine learning pipelines into the university's database.

## LEADERSHIP & INVOLVEMENT

### President

Aug 2024 – May 2025

*Black Muslim Coalition Duke University*

*Durham, NC*

- Directed advocacy and community initiatives reaching 150+ students; increased engagement by 40%.
- Secured funding and built partnerships with 5+ Duke departments and organizations.

### Member

Oct 2023 – Present

*National Society of Black Engineers (NSBE)*

*Durham, NC*

- Engaged in professional development and mentorship programs to support Black engineers in tech and academia.

### Member

Aug 2024 – Present

*Duke Applied Machine Learning (DAML)*

*Durham, NC*

- Collaborate with peers on real-world AI projects applying machine learning to healthcare and environmental challenges.

### Event Coordinator

Aug 2024 – Present

*Muslim Students Association Duke University*

*Durham, NC*

- Planned and executed 10+ campus events with 100–200 attendees, overseeing logistics, catering, and communications.
- Introduced a planning workflow that cut event setup time by 25%.