Naimo Ahmed

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Education

Duke University, Durham, NC **Aug 2024 - May 2028**
Bachelor of Science in Computer Science
Relevant Coursework: Introduction to Computer Science, Calculus and Functions I (Lab), Data Structures and Algorithms, Statistics, Calculus II
Extracurriculars: Duke Technology Scholars (DTech), National Society of Black Engineers (NSBE), CS Sidekicks, Muslim Students Association (MSA), Black Muslim Coalition (BMCO), ColorStack, The Backpack Project (Nonprofit For Homelessness)

Work Experience

Duke Alumni Engagement and Development (Code+ Program), Durham, **NC** **May 2025 - Present**
Software Engineering Intern

- Engineered scalable ETL pipelines (Python, Flask, Selenium, MongoDB, Neo4j) to process 25+ years of philanthropic data, powering interactive graph networks that revealed hidden donor–scholar relationships; collaborated with a 5-person team using Git and agile sprints.
- Developed and deployed ML-based matching and ranking services (all-MiniLM-L12-v2 embeddings, cosine similarity, GPT-4) on cloud infrastructure, aligning donor interests with Duke initiatives and identifying $10M+ in funding opportunities.
- Built an AI-powered chatbot and accessible web platform (HTML/CSS/Jinja2, ARIA standards) with integrated REST APIs and automated testing, reducing manual research time for advancement staff and improving data-driven outreach efficiency.

CS Sidekicks, Duke University, Durham, **NC** **Aug 2024 - Present**
Computer Science Tutor

- Taught core computer science concepts (algorithms, data structures, block- and text-based programming) to students at varying skill levels, strengthening their problem-solving and coding proficiency.
- Mentored students in debugging and programming best practices, fostering computational thinking, resilience in problem-solving, and strong coding habits.
- Facilitated group coding challenges and collaborative projects to promote teamwork, creativity, and hands-on application of programming skills.

DTech Scholars Program (Technical Fellowship Program), Duke University, Durham, **NC** **Aug 2024 – Present**
Fellowship Scholar

- Selected as a DTech Scholar, gaining technical career development through workshops, mentorship, and structured internship preparation for software engineering roles.
- Collaborated with peers and industry mentors in Scholar Circles and networking events to strengthen problem-solving, explore career paths, and build professional connections in tech.

Projects

Clever GuessWord Game | *Python, Data Structures & Algorithms*

- Engineered a Hangman-style game in Python with debug/play modes, dynamic word filtering, and state tracking, applying algorithms and modular design to enhance flexibility and performance.
- Implemented reusable functions for input validation, error handling, and replay/statistics features, improving code maintainability, scalability, and overall user experience.

Recommender System | *Python, Data Structures & Algorithms*

- Engineered a Python-based recommendation engine leveraging file I/O, dictionaries, and sorting algorithms to generate best-match results, applying core data structures and algorithm design.
- Designed modular, reusable components (RecommenderEngine, RecommenderMaker, MovieReader, BookReader) to enable flexible recommendations across datasets, improving scalability and maintainability.

DNA Strand Implementations & Benchmarking | *Java*

- Implemented three DNA sequence data structures (StringStrand, StringBuilderStrand, LinkStrand) in Java to compare performance trade-offs for appending, reversing, and random access operations.
- Developed a benchmarking suite to evaluate cut-and-splice operations across varying strand sizes and enzyme frequencies, analyzing runtime and memory efficiency across implementations (O(n) vs. constant-time behaviors).

Skills

Programming & Languages: Python, Java, JavaScript, R, HTML/CSS

Frameworks, Tools & Databases: Flask, Docker, Git, GitHub, REST APIs, Jinja2, MongoDB, Neo4j

AI/ML & Data Science: Web-Scraping (Selenium), Embeddings, Similarity search, GPT-4 integration, Data Analysis