Muhammad Hamza

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EDUCATION

SUNY Farmingdale State College

Farmingdale, NY

 $Bachelor\ of\ Science\ in\ Computer\ Science,\ Minor\ in\ Mathematics$

Aug. 2022 - May 2026

GPA: 3.86

Experience

Undergraduate Research Intern

May 2025 – Present

Stony Brook, NY

Stony Brook University

• Conducting research in robotics and machine learning, focusing on intelligent systems that interpret complex tasks.

- Designing experiments to test LLMs' performance in robotic planning scenarios, incorporating planning techniques like PDDL.
- Applying A* and Dijkstra's algorithms to feed the machine with various task-based scenarios, enabling autonomous
 decision-making and pathfinding.

Math Tutor Feb 2025 – Present

Farmingdale State College

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- Tutored over 25 students one-on-one in Calculus, Algebra, and Linear Algebra.
- Created personalized lesson plans to meet individual learning goals and improve subject comprehension.
- Received positive feedback from students and faculty on communication clarity and academic impact.

Projects

FitTrack | Java, JavaFX, Azure MySQL, Maven

August 2024 – December 2024

- Developed a comprehensive fitness tracking application that allows users to set running goals, track progress, and access running analytics and personalized fitness recommendations.
- Led a team of five student programmers using Java , JavaFX, and Azure MySQL Database, with Maven for dependency management, to create a user-friendly and data-driven experience.
- Deployed a responsive UI using JavaFX and managed dependencies with Maven to ensure scalability.

Farmingdale Innovation Challenge 2024

Dec 2024

- Collaborated with a team to develop an alternative battery for electric vehicles, addressing global sustainability and
 efficiency challenges.
- Focused on brainstorming innovative solutions and presenting the final product as part of a group competition.

User Management Application | Java, Spring Boot, SQL, PDF Libraries

Aug 2024 – Dec 2024

- Developed a full-stack application for managing user data with features including import/export functionality, add/remove users, and PDF generation for reports.
- Utilized Java, SQL, and Spring Boot for backend operations, integrating third-party libraries for PDF creation.

TECHNICAL SKILLS

Languages: Java, SQL, C++, Python

Tools: IntelliJ, GitHub

 $\textbf{Interests} : \ \textbf{Application Development}, \ \textbf{Code Optimization}, \ \textbf{Algorithm Analysis}, \ \textbf{Natural Language Processing}, \ \textbf{Machine Proc$

Learning, Robotics