Mauzam Shafi Bhat

Durham, North Carolina, USA
mb948@duke.edu | +1-(919)282-8855 | linkedin.com/in/mauzamshafibhat | github.com/MAUZAMSHAFIBHAT

Education

Duke University, USA Aug 2025 – May 2027
Master of Science in Computer Science
Courses: Design and Analysis of Algorithms, Advanced Computer Networks, Operating Systems

SRM Institute of Science and Technology, India Sept 2020 – Jun 2024
Bachelor of Technology in Electronics and Computer Engineering | CGPA: 8.53/10
Courses: Data Structures and Algorithms, Object Oriented Design and Programming, Applied Programming, Programming for Problem Solving, Machine Learning I, Principle of Artificial Intelligence

Skills

Languages: Python, C, C++, SQL, HTML, CSS
Libraries/Frameworks: TensorFlow, PyTorch, Scikit-learn, OpenCV, YOLO, Mask R-CNN, NetworkX, Django
Databases/Tools: MySQL, AWS, SageMaker, Git, Linux, NumPy, Pandas, Matplotlib

Work Experience

Software Development Intern | Infosys Oct 2024 – Dec 2024

- Designed a Django-based platform with real-time dashboards, improving waste management efficiency by 30%.
- Integrated deep learning models to enhance waste categorization accuracy by 25%.

Machine Learning Intern | Eduskills Mar 2023 – Jul 2023

- Built an ML pipeline on AWS SageMaker, reducing data processing time by 40%.
- Predicted customer churn using demographic and behavioral data to improve retention.

Data Science Intern | Tech Analogy Apr 2022 – Jun 2022

- Forecasted sales volumes with 92% accuracy by analyzing historical and behavioral data.
- Improved resource allocation efficiency and boosted team productivity.

Projects

Intelligent Network Map Analysis and Topology Reconstruction | Python, YOLO, Mask R-CNN, NetworkX

- Developed an AI/ML pipeline to extract and reconstruct network topologies from cloud provider schematics (AWS, Azure, Google Cloud).
- Achieved 80% topology reconstruction accuracy and 85% object detection precision.

XV6 CPU Scheduling Enhancement | C, xv6, Operating Systems

- Implemented and evaluated advanced CPU scheduling algorithms (Priority, MLFQ) to improve process fairness and CPU utilization.
- Analyzed turnaround time, waiting time, and throughput to measure performance.

Optimized Autonomous Vehicle Functionalities with CNN | Python, CNN, AutoPilot

- Implemented autonomous steering and throttle control using Raspberry Pi and CNNs for real-time navigation.
- Reduced bandwidth usage and computation by 20% through optimized control algorithms.

Hackathons

TreeHacks | Stanford University, USA

- Collaborated with developers and healthcare experts to design a healthcare prototype using Python and ML within 48 hours.