Uzma Hamid

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EDUCATION

Texas A &M University — College Station, TX
Bachelor of Science in Computer Science — *Dec 2025*
GPA: 4.0

Relevant Coursework: Object-Oriented Programming, Data Structures & Algorithms, Database Design, Software Engineering, Computer Architect, Artificial Intelligence, Machine Learning, Cloud Computing, Statistics, Linear Algebra, Cyber Security Risk, Computer & Network Security

EXPERIENCE

AI/ML Research Internship — Jun 2024 – Aug 2024
Stanford University LINXS — *Stanford, CA*
- Conducted research to improve domain generalization in machine learning models.
- Analyzed inverse linear relationships between in-domain and out-of-domain accuracies. Conducted experiments with various classifiers across 10+ diverse tableshift datasets to validate.
- Enhanced domain generalization by creating benchmarks with minimal or negative correlation between in-domain and out-of-domain accuracies, improving reliability by 15%

Student Software Engineer — Aug 2024 – Present
Texas A&M University - College of Nursing — *College Station, TX*
- Integrating RAG using OliviaHealth as knowledge base, enhancing iCHILD's response accuracy and latency
- Implementing vectorization pipelines, vector search algorithms, leveraging NLP and LLMs to deliver health info.

Computer Vision Research Assistant — Jan 2022 – Jan 2023
Drake University — *Des Moines, IA*
- Led research on advanced computer vision techniques for object detection and image analysis.
- Developed a Python-based annotation tool incorporating algorithms for contour detection, polygon approximation, and image manipulation.
- Achieved an 85% success rate in object detection tasks and improved annotation efficiency by 30%. Presented findings at the Consortium for Computing Science Conference, showcasing significant contributions to the field

Computer Technician — Jan 2023 – Present
Texas A&M University — *College Station, TX*
- Responsible for maintaining and troubleshooting campus computer systems
- Maintain upkeep of computer, deliver on-call support, effectively responding to technical issues

Project Manager — Aug. 2023 – Nov. 2023
Aggie Coding Club — *College Station, TX*
- Led a team of **10+** students in building a sophisticated book recommendation generator **web application**.
- Trained students on utilizing the Django framework for backend and implementing frontend design principles.
- Coordinated project **timelines**, tasks, and resources to ensure timely delivery of the web application.

Teaching Assistant — Jan 2024 – May 2024
Texas A&M University — *College Station, TX*
- Assisted in delivering high-quality instruction in C++ programming.Mentored 300+ students through interactive lab sessions and provided hands-on support with programming assignments.
- Achieved a 90% passing rate among students, with a 30% increase in average assignment scores, reflecting a significant improvement in student understanding and performance.

Undergraduate Researcher — Sep 2021 – Dec 2022
Drake University — *Des Moines, IA*
- Conducted research on spacecraft configurations and magnetic fields for radiation protection
- Developed and optimized a Monte Carlo simulation method to test various magnetic field configurations. Refined simulation techniques to reduce processing time and explore multiple scenarios efficiently
- Reduced simulation time by 40% and improved the accuracy of magnetic field configuration predictions. Enhanced understanding of radiation shielding requirements, leading to more effective spacecraft design recommendations.

Projects

eVe AI Support | [GitHub](#) | *React, TypeScript, GeminiAPI*
- Engineered real-time message processing, integrated Google Generative AI for dynamic responses
- Created an intuitive user interface with optimized image handling, ensuring a seamless experience for managing and interacting with AI-generated content

Revs | [GitHub](#) | *Python, Django, Jira, PostgreSQL, JavaScript, HTML/CSS, Agile, Figma*
- Developed a customized point-of-sale application for Rev's Grill using Django
- Incorporating client-requested features like OAuth authentication, Open Weather API and manager reports, to enhance order placement and operational efficiency

Find Earth | [GitHub](#) | *Java, Node js, OpenAI API, News API, Git*
- Developed a web application during HackHarvard, providing one-click access to climate change news by location
- Implemented an AI-powered news feature using OpenAI-API and News APIs to enhance content relevance

Chip Visualization | [GitHub](#) | *Python, PIL, Numpy, Glob, Scipy*
- Developed a Python program to identify image similarity identification
- Utilized deep neural networking and the **Euclidean distance matrix** to achieve an accuracy rate above **90%**
- Employed **VGG** and **ResNet50** datasets to increase the accuracy of image similarity calculations

Tabletop Segmentation | [GitHub](#) | *Python, PIL, Numpy, Matplotlib, Tensorflow*
- Led research in image segmentation of table-top objects using Graph Neural Networks.
- Developed and implemented a deep learning-based object grasping model, resulting in a 30% improvement in successful grasps by robotic systems.
- Successfully tested and trained OCID and OSD datasets, enhancing model robustness and contributing to a reduction in false positives during object recognition

Leadership

Web Developer - CodePath
Donald V Adams Leadership Institute
NASA Space Grant
APSTEM Technology Ambassador
International Student Association
National Science Congress

Technical Skills

Languages: Python, Java, C++, SQL(PostgreSQL), NoSQL(MongoDB), JavaScript, HTML/CSS
Developer Tools: VS Code, Git, GitHub, Maven, Docker, Jupyter, Redis, AWS
Frameworks/Libraries: React, Django, Vue.js Ruby on Rails, PyTorch, Scikit-Learn, Tensorflow