MD SAZIDUL ISLAM

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Summary

Aspiring researcher in machine learning with hands-on experience in robotic, vision transformers, medical AI, and embedded AI systems. Published first-author work at ICAIAM-25 and actively engaged in journal-level research in AI and robotics. Motivated to pursue a PhD focused on developing robust, scalable intelligent systems for healthcare and autonomous platforms.also interested in Artificial Intelligence, Machine Learning, Medical Image Analysis, Vision Transformers, Multimodal Learning, Human-Centered AI, Intelligent Systems, Robotics Perception, Scalable & Real-Time AI Systems.

Education

Master of Science in Data Science
Clayton State University, USA — *Expected May 2026*
GPA: 4.00 / 4.00

Master of Business Administration (MBA)
Reformed University, USA — *May 2024*

Bachelor of Engineering in Mechanical Engineering & Automation
Sanming University, China — *April 2020*
GPA: 3.90/4.00

TECHNICAL SKILLS

Programming Languages: Python, R, Java, SQL, JavaScript, Bash
Deep Learning Frameworks: PyTorch, TensorFlow/Keras, timm, torchvision, Hugging Face Transformers, ONNX
ML & Computer Vision: scikit-learn, OpenCV, albumentations, MONAI, SimpleITK, Grad-CAM, SHAP, LIME
Data Science Stack: NumPy, pandas, Matplotlib, Seaborn, Plotly, SciPy, statsmodels
Development & MLOps: Git/GitHub, Docker, Weights & Biases, MLflow, DVC, Jupyter, VS Code, Linux
Cloud Platforms: AWS (EC2, S3, SageMaker), Google Cloud Platform (Compute Engine, Vertex AI), Azure ML

PUBLICATIONS & MANUSCRIPTS

islam, MD Sazidul., *Face Recognition on Hexapod with a Low-Cost Raspberry Pi*, Accepted at ***ICAIAM 2025***.

islam, MD Sazidul., *Face Recognition on Hexapod with a Low-Cost Raspberry Pi* (Extended Version), Under review at *Research Plus*, 2026.

islam, MD Sazidul. — *AI-Based Detection Models for Complex Pattern Recognition*.
Research manuscript in preparation.

islam, MD Sazidul. — Uncertainty-Aware Swin Transformers for Clinical Skin Cancer Detection: Bridging Research and Practice Through Confidence-Calibrated Predictions.

RESEARCH EXPERIENCE

NSF-Funded Skin Cancer Detection using Vision Transformers

Clayton State University | 2025 – Present

- Developed a **deep learning framework for 7-class skin lesion classification** using the HAM10000 dataset
- Implemented **Swin Transformer architectures** in PyTorch and timm for medical image analysis
- Addressed **class imbalance** using augmentation and weighted loss functions.
- Overall Accuracy 87.82%, F1-Score 88.26%.
- Improved feature representation and model generalization for subtle lesion boundaries
- Conducted comparative experiments against CNN baselines (ResNet/EfficientNet)
- Focused on **clinical reliability, robustness, and deployment feasibility**
- **Manuscript in preparation** for submission to a medical AI / computer vision conference

Federal AI Detection Model

Research manuscript in preparation.

PROFESSIONAL EXPERIENCE

Marketing Manager — Crescent Realty Group, GA (2024–2025)
Used data analytics to support decision-making and performance optimization.

Chief Coordinator — Career Consultancy Point (2017–2021)
Led team operations, managed logistics, and coordinated organizational projects.

LEADERSHIP & COLLABORATION

Collaborative research in AI, medical imaging, and intelligent systems.

Experience presenting technical work to interdisciplinary audiences.

Mentored peers in machine learning project implementation.

Independent Research Project | 2025

- Contributed to development of an **AI-based detection framework** for identifying complex patterns in high-dimensional data in the insurance, loan and criminal justice sector.
- Applied **machine learning and deep learning techniques** for robust classification and anomaly detection.
- Focused on **model performance, scalability, and reliability** in real-world operational environments.
- Worked in data preprocessing, model training, and evaluation pipeline design.

AI for Human–Robot Interaction (Hexapod Robotics System)

Clayton State university | 2025

- Designed a **real-time face recognition system** integrated into a Hexapod robotic platform
- Used **DeepFace and FaceNet embeddings** for identity recognition
- Built a **multi-threaded PyQt5 GUI** for low-latency perception and control
- Demonstrates application of **AI perception, embedded systems, and human-centered interaction.**

LANGUAGES

English, Bengali, Chinese, Hindi, Urdu

SELECTED ACADEMIC PROJECTS

Medical AI Web Application Deployment

- Built a **Streamlit/Flask-based application** to deploy trained deep learning models for medical image prediction

CNN-Based Image Classification

- Developed convolutional neural network models for image recognition tasks with high classification accuracy