Shahid Kamal

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EDUCATION

Northeastern University Boston, MA
MS in Electrical and Computer Engineering (Computer Vision and Machine Learning) Expected Dec 2026
Relevant Coursework**:** Machine Learning Operations, Machine Learning, Deep Learning, Advanced Computer Vision, Reinforcement Learning, Algorithms, Robotics Sensing and Navigation, Large Language Models (Audit)

Aligarh Muslim University India
BE in Electrical Engineering 2019-2023

EXPERIENCE

Checkit Analytics - **AI Engineer (California, United States**) Jan 2026 – Aug 2026
- Built LLM-based RAG pipelines for grounded financial question answering and analytics
- Fine-tuned and deployed Qwen3-4B as the in-house backbone LLM, eliminating external API costs
- Built Rumor Check, a misinformation detection app leveraging LLM-as-Judge evaluation, and deployed it on AWS

Centre of Advanced Research in Electrified Transportation - Research Intern (Aligarh, India) Dec 2022 - Feb 2023
- EV battery systems suffered from inefficiencies, leading to high energy loss during charging
- Optimized EV Battery Management System using Machine Learning, improving charging efficiency by 7%
- Used Random Forrest and LSTMs, reducing energy loss during charging by 10%

Indian Institute of Information Technology - Research Intern (Allahabad, India) June 2022 - July 2022
- Worked with the research team on developing a dynamic routing mechanism in Capsule Neural Networks
- Researched different Routing mechanisms in CNNs and presented findings in the seminar
- Developed a hybrid architecture inception_efficientcaps for dynamic routing in CNN Networks

PROJECTS

MotionBlind - Northeastern University (ACLab) July 2026 – Sep 2026
- Built a contrastive video benchmark of 82 self-recorded clips and 240 Q&A items isolating speed, magnitude, and direction
- Ran 170+ evaluation configuration across 8 video-Language models with 4 frame selectors and 5 frame budgets
- Showed open models score at the 6.25% chance floor on motion despite reaching 58-70% on Stanford video QA

Lab Lens – Healthcare AI and MLOps Project Sep 2025 - Dec 2025
- Built an end-to-end healthcare AI system for medical report summarization, diagnostic image analysis, and risk prediction
- Implemented a RAG Q&A pipeline enabling semantic search and patient-friendly insights from complex medical reports
- Designed MLOps workflows with model evaluation, monitoring, and bias checks for reliable and scalable deployment

Contrast Enhanced Emotion Recognition using Deep Learning Jan 2025 **-** April 2025
- Built a facial emotion recognition system classifying 7 expressions on the FER2013 dataset using custom CNN and resnet-18
- Implemented CLAHE contrast enhancement pipeline to improve model robustness on low contrast images facial images
- Evaluated baseline vs contrast enhanced preprocessing strategies, achieving 58.19% test accuracy with a custom CNN

SKILLS

Programming Languages: Python, MATLAB, C, C++, SQL
Machine Learning frameworks: TensorFlow, PyTorch, Keras, Numpy, Matplotlib, Pandas, Scikit-learn,
Robotics: ROS 2, SLAM, Robotics Perception, Sensor Fusion, Kalman Filter, Navigation
Tools: Git, GitHub, AWS, GCP, CI/CD Integration, Docker, Kubernetes

PUBLICATIONS

- Dhairya Bhatia, Bishoy Galoaa, Oliver Fritsche, **Shahid Kamal**, Muhammad Obaidullah Abdul Salam, Umer Saleem, Om Rastogi, Frania Felix Chettiar, Nesli Erdogmus, Sarah Ostadabbas, "MotionBlind: Probing the Illusion of Motion Understanding in Video-LLMs," *arXiv preprint arXiv:2609.09528*, 2026
- **Shahid Kamal,** Dr. Mohammad Sarfraz, Sumaiya Fatma, Ifat Al Fatma, Shagufta Parween, Muhammad Al Maathidi, "**Comparative Analysis of deep learning techniques for fast detection of COVID-19 using CXR images**", Proceedings of International Conference on Advances i*n* Computational Intelligence and its Applications*,* 2023, **Taylor and Francis, CRC Press**,