Md Ashik Khan — Curriculum Vitae

Mirzapur-1940, Tangail – Dhaka, Bangladesh
+880 1796 103496 • ashik.khan@kgpian.iitkgp.ac.in • iamashik
Anashikforu • Google Scholar: EKQLSHQAAAAJ

Research Interests

Computer Vision, Medical Imaging, Multimodal Learning, 3D Human Activity Recognition, Video Action Recognition, Cross-Domain Generalization, Fake News Detection, AI-Generated Content Detection, Low-Light Vision, Efficient Deep Learning, Transfer Learning

Education

Indian Institute of Technology (IIT) Kharagpur **India**
Master of Technology (M.Tech), CGPA: 8.76/10 *2021–2023*
Specialization: Computer Science and Engineering
Thesis: A Large-scale Study of Representation Learning and the Benchmarking in Video Action Recognition
Supervisor: Dr. Abir Das
Scholarship: ICCR Scholarship (Bangladesh Scholarship Scheme)
Key Coursework: Machine Learning, Information Retrieval, Artificial Intelligence, Complex Networks, Data Analytics, Algorithm Design, Scalable Data Mining

Bangladesh Army University of Science and Technology **Saidpur, Bangladesh**
Bachelor of Science (B.Sc), CGPA: 3.35/4.00 *2015–2019*
Specialization: Computer Science and Engineering
Key Coursework: Object Oriented Programming, Data Structures, Algorithms, Database Management System, Machine Learning, Data Mining, Artificial Intelligence, Digital Image Processing

Professional Experience

Auptimate **Dhaka, Bangladesh**
Software Engineer *May 2023–Present*
- Developing and maintaining AI-driven e-signature platform for document processing, management, tracking, and electronic signing
- Designing and implementing AI Agent to assist customers with legal document-related processes
- Working on scalable backend systems and RESTful APIs for enterprise document management

Computer Vision and Intelligence Research (CVIR) Lab, IIT Kharagpur **India**
Research Assistant *June 2022–April 2023*
- Conducted comprehensive analysis of 2D/3D CNNs and Transformer architectures for video action recognition
- Evaluated transfer learning across 14 datasets using state-of-the-art models (SlowOnly, TimeSformer, SIFAR)
- Established benchmarks for cross-domain transfer learning in action recognition
- Developed correlation studies between pretraining dataset similarity and downstream performance

Hovata Technologies **Dhaka, Bangladesh**
Assistant Programmer *March 2020–August 2021*
- Developed PetrolERP: comprehensive web application for petroleum industry business automation
- Implemented sales and inventory management modules with real-time tracking capabilities
- Led development of Hovata Parking System for parking space management and optimization
- Built RESTful APIs with Lumen Framework and responsive UIs with React JS and Redux

MerinaSoft **Dhaka, Bangladesh**
Junior Software Developer *September 2019–February 2020*

- Developed inventory management systems using Laravel framework
- Created Android applications based on client requirements
- Contributed to project management, requirement analysis, and UI design

Publications

Peer-Reviewed Conference Papers

[1]: **Md Ashik Khan**, Rafath Bin Zafar Auvee. "Comparative Analysis of Resource-Efficient CNN Architectures for Brain Tumor Classification." *2024 27th International Conference on Computer and Information Technology (ICCIT)*, Cox's Bazar, Bangladesh, 2024, pp. 639-644. *(Cited by 21)*

Journal Papers Under Review

[2]: Md Nahid Siddique*, **Md Ashik Khan***, Md Rezaul Karim Khan, Naphtali David Rishe, Dongsheng Luo. "Cross-Domain Generalization in Fake News Detection: A Systematic Evaluation and Analysis." *Under review at Q1 journal*, 2025. *(*Equal contribution)*

[3]: **Md Ashik Khan**, Abu Saleh Musa Miah, Fahmid Al Farid, Md Abdur Rahim, Hezerul Abdul Karim. "Low-Light Aware 3D Human Activity Recognition Using Frozen CLIP with Lightweight Adaptation." *Under review at Q1 journal*, 2025.

Conference Papers Accepted

[4]: **Md Ashik Khan**, Md Nahid Siddique. "Fixed-Budget Parameter-Efficient Training with Frozen Encoders Improves Multimodal Chest X-Ray Classification." *Accepted at 2025 28th International Conference on Computer and Information Technology (ICCIT)*, Cox's Bazar, Bangladesh, 2025. *(arXiv preprint: 2512.21508)*

[5]: **Md Ashik Khan**, Arafat Alam Jion. "Fixed-Threshold Evaluation of a Hybrid CNN-ViT for AI-Generated Image Detection Across Photos and Art." *Accepted at 2025 28th International Conference on Computer and Information Technology (ICCIT)*, Cox's Bazar, Bangladesh, 2025. *(arXiv preprint: 2512.21512)*

Teaching Experience

Department of CSE, IIT Kharagpur
Teaching Assistant *Spring 2022-23*
Course: Software Engineering (CS20202)
Responsibilities:

- Conducted tutorial sessions for 100+ undergraduate students
- Evaluated assignments and semester projects
- Mentored student groups during software development projects
- Supervised lab sessions and provided technical guidance

Department of CSE, IIT Kharagpur
Teaching Assistant *Autumn 2022*
Course: Algorithms-I (CS21203)
Responsibilities:

- Conducted tutorials on fundamental algorithm design and analysis
- Mentored a group of 20 students during lab sessions
- Evaluated assignments and provided feedback on algorithmic problem-solving

Academic Service

2025: Reviewer, International Conference on Intelligent Data Analysis and Applications (IDAA 2025), Daffodil International University

Selected Research Projects

IIT Kharagpur

Large-scale Study of Representation Learning in Video Action Recognition *July 2022–April 2023*

- Performed comprehensive analysis of 2D/3D CNNs and Transformer-based architectures
- Evaluated representation transfer learning across 14 target datasets through 6 SOTA architectures
- Established benchmarks for cross-domain transfer learning effectiveness
- Identified optimal transfer learning strategies for various action recognition datasets
- *Technologies: PyTorch, MMAction2, FFmpeg*

Deep Learning-based Hidden Camera Detection using Synthetic Training Data *Spring 2024*

- Developed novel synthetic data generation procedure for surveillance detection
- Created large-scale training dataset combining background environments with camera placements
- Fine-tuned ResNet50 and YOLOv8 with custom augmentation strategies
- *Technologies: PyTorch, OpenCV, Computer Vision*

IIT Kharagpur

Context Specific Quote Recommendation from Historical Text *Autumn 2022*

- Developed context-based quote recommendation system using DistilBERT
- Prepared dataset and annotations from Quotation POTUS corpus
- Achieved 82.25% accuracy using transfer learning and fine-tuning techniques
- *Technologies: Python, PyTorch, Hugging Face Transformers*

OCR Service with NER and Sentiment Analysis *March 2024*

- Built FastAPI-based web application for Optical Character Recognition
- Integrated Named Entity Recognition using spaCy and sentiment analysis using TextBlob
- Implemented both synchronous and asynchronous APIs with Redis caching
- *Technologies: Python, FastAPI, Tesseract, spaCy, Redis, Docker*

Technical Skills

Programming: Python, C++, JavaScript, PHP, Java
Deep Learning: PyTorch, TensorFlow, Keras, Hugging Face Transformers
Computer Vision: OpenCV, MMAction2, YOLO, Image Processing, Video Analysis
Web Development: React.js, Redux, Node.js, FastAPI, Laravel, Lumen, REST APIs
Databases: MySQL, PostgreSQL, Redis, MongoDB
Tools & Platforms: Git, Docker, AWS, Linux, FFmpeg, LaTeX
ML Libraries: scikit-learn, NumPy, Pandas, Matplotlib, spaCy, NLTK

Achievements & Awards

2021–2023: ICCR Scholarship under Bangladesh Scholarship Scheme for M.Tech at IIT Kharagpur
2021: NVIDIA DLI Certificate: Fundamentals of Accelerated Data Science with RAPIDS
2018: Training for Mobile Application Developer, ICT Division, Bangladesh
2018: Finalist, BAUST-IEEE Idea Contest
2016: Honorable Mention, Inter-University Programming Contest, IUBAT, Dhaka
2012: Board Talent Rank 35th, Secondary School Certificate (SSC) Examination, Dhaka Board

References

Assistant Professor **Department of Computer Science and Engineering**
Dr. Abir Das, IIT Kharagpur, India
Email: abir@cse.iitkgp.ac.in
Website: https://cse.iitkgp.ac.in/~abir/

Additional references available upon request