Shahriar Khan

Bachelor of Science (B.Sc.)
Computer Science & Engineering
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PROFESSIONAL SUMMARY

Computer Science student specializing in production-ready deep learning systems with proven deployment experience. Built real-time object detection systems achieving 92% accuracy on edge devices, Bengali OCR pipelines processing 30+ vehicles/minute, and autonomous UAV control systems. Combines strong theoretical foundation (3.92 CGPA, Full Merit Scholarship) with hands-on expertise in PyTorch, TensorFlow, and full-stack development.

EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Sc., CSE	East West University, Dhaka	CGPA: 3.92/4.00	2022 - 2026
Higher Secondary Certificate	Government Science College, Dhaka Board	GPA: 5.00/5.00	2020
Secondary School Certificate	National Ideal School, Dhaka Board	GPA: 5.00/5.00	2018

TECHNICAL SKILLS

- **Programming Languages**: Python, Java, Kotlin, JavaScript, TypeScript, C++, SQL, LaTeX, MATLAB, Shell
- **Deep Learning & ML**: PyTorch, TensorFlow, Keras, Ultralytics YOLOv8, TensorRT, scikit-learn, Transfer Learning
- **DevOps & Tools**: Git, GitHub, GitLab, Docker, VS Code, PyCharm, Android Studio, Jupyter, Google Colab
- **Creative Tools**: DaVinci Resolve, Premiere Pro, Adobe Illustrator, Photoshop, After Effects, Blender
- **Mobile Development**: Android SDK, Kotlin, Jetpack Compose, TensorFlow Lite, Camera2 API, Firebase

WORK EXPERIENCE

- **East West University** *November 2024 - Present*
  Undergraduate Teaching Assistant - Department of Computer Science and Engineering Dhaka, Bangladesh
  - Assisted Associate Professor in course delivery and academic support for 80+ undergraduate students
  - Streamlined course material management system, reducing administrative workload by 30%
  - Graded assignments and provided technical mentorship on programming concepts and algorithms
  - Managed digital resources, documentation, and communication between faculty and students

- **East West University Programming Club** *December 2023 - Present*
  General Member Dhaka, Bangladesh
  - Volunteered at 5+ programming contests including inter-university competitive coding events
  - Participated in multiple ICPC-style programming competitions representing the university
  - Co-organized coding workshops and technical sessions reaching 100+ students
  - Collaborated with team members to foster competitive programming culture on campus

- **Government Science College Photography Club** *May 2018 - November 2020*
  Vice President Dhaka, Bangladesh
  - Led and coordinated National Photography Festival with 200+ participants and 15+ events
  - Managed 20-member executive committee and organized volunteer activities for college festivals
  - Secured 1st place in Cloud's Den Photography Competition among 15 teams
  - Participated in AIUB Science Festival Poster Competition and showcased work at Drik's Gallery Exhibition

TECHNICAL PROJECTS

- **Real-Time Object Detection System using YOLO** *Ongoing*
  Tools: Python, PyTorch, Ultralytics YOLOv8, OpenCV, TensorRT [○]
  ◦ Developed real-time object detection system achieving 92% mAP on custom dataset using YOLOv8 architecture
  ◦ Optimized model for edge deployment on Jetson Nano, achieving 40% FPS improvement (15→21 FPS) via TensorRT
  ◦ Integrated multi-object tracking algorithms (DeepSORT, ByteTrack) with 85% tracking accuracy
  ◦ Processed 1000+ hours of video data for training and validation across diverse lighting conditions

- **Bengali License Plate Recognition System (ANPR)** *Completed*
  Tools: Python, TensorFlow, EasyOCR, Tesseract, OpenCV, Flask [○]
  ◦ Designed end-to-end ANPR pipeline achieving 92% character recognition accuracy on 5000+ Bengali plates
  ◦ Integrated ensemble of OCR engines (EasyOCR, Tesseract, PaddleOCR) for robust text extraction
  ◦ Developed RESTful API using Flask processing 30+ vehicles per minute in real-world deployment
  ◦ Created custom dataset of 3000+ annotated Bengali license plates for model training

- **Autonomous UAV Control and Aerial Image Analysis** *Ongoing*
  Tools: Python, DroneKit, MAVLink, OpenCV, QGroundControl, DJI SDK [○]
  ◦ Developed autonomous drone control system using MAVLink protocol for GPS-guided navigation
  ◦ Implemented real-time aerial image analysis pipeline detecting objects from 50+ meter altitude
  ◦ Created mission planning interface supporting waypoint navigation for 20+ flight missions
  ◦ Integrated computer vision algorithms for object detection achieving 78% accuracy on aerial imagery

- **Full-Stack IoT Monitoring Dashboard** *Completed*
  Tools: React.js, Node.js, Express.js, MongoDB, Firebase, JWT [○]
  ◦ Built complete IoT system with real-time data logging handling 10,000+ sensor readings per hour
  ◦ Developed responsive React dashboard with real-time WebSocket updates and data visualization charts
  ◦ Implemented secure JWT authentication system and role-based access control for 50+ users
  ◦ Deployed on cloud platform with 99.5% uptime and integrated remote device control capabilities

- **Android Machine Learning Application** *Completed*
  Tools: Kotlin, Android SDK, TensorFlow Lite, Camera2 API, Jetpack Compose [○]
  ◦ Created Android app with on-device ML achieving 60ms inference time on mobile processors
  ◦ Implemented real-time camera processing pipeline using Camera2 API with 30 FPS processing
  ◦ Optimized TensorFlow Lite models reducing size by 75% (12MB→3MB) for mobile deployment
  ◦ Designed modern UI using Jetpack Compose with 4.2/5.0 user rating on internal testing (20+ users)

ACHIEVEMENTS & SCHOLARSHIPS

- Full Tuition-Free Merit Scholarship, East West University (100% tuition waiver) *2022*
- Deans Merit Scholarship, East West University *Spring 2025*
- Merit Scholarship and Dean's List, East West University *Fall 2024*
- Champion - Secured 1st rank among 15 teams, Cloud's Den Photography Competition *2022*
- Runners Up - 2nd place in Short Film Making Contest, Scholastica Photography Festival *2022*

REFERENCES

Sarwar Jahan *Additional references available upon request*
Associate Professor
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