BASHARUL - ALAM - MAZU

Software Engineer | ASP .NET & AI/ML
basharulalam6@gmail.com | +880 1813 890622
github.com/basharulalammazu | linkedin.com/in/basharulalammazu
135/6/7 North Mugdhapara, Dhaka – 1214, Bangladesh

PROFESSIONAL SUMMARY

Results-driven Software Engineer with proven experience in architecting enterprise-grade .NET applications and deploying production AI/ML pipelines. Proficient in ASP.NET Core, C#, SQL, Python, and deep learning frameworks. Track record of integrating computer vision systems into real-world workflows, achieving up to 98.6% model accuracy, and delivering clean, well-documented code in agile environments. Published researcher (under review) in medical AI. Actively seeking a role to leverage full-stack .NET and machine learning expertise to drive measurable business impact.

PROFESSIONAL EXPERIENCE

Software Engineer Intern | Datasoft Manufacturing & Assembly Inc. (DMA) *Feb 2026 - Present*

- Develop and maintain scalable enterprise backend services using Deep Learning and Django, directly contributing to production-grade software used across manufacturing operations.
- Integrate computer vision and AI pipelines into existing backend workflows, reducing manual inspection overhead by automating image-based quality checks.
- Collaborate in agile sprint cycles, conducting code reviews, debugging critical issues, and optimizing SQL queries to improve application response time and reliability.
- Champion clean architecture principles (MVT, 3-Tier) and REST API design standards, improving codebase maintainability and onboarding efficiency for new team members.

EDUCATION

B.Sc. in Computer Science and Engineering *GPA: 3.77 / 4.00*
American International University-Bangladesh (AIUB)

TECHNICAL SKILLS

Backend	ASP.NET Core, ASP.NET MVC, C#, .NET Framework, REST APIs, Django
AI / ML	TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Transfer Learning, Grad-CAM, Computer Vision, Object Detection
Languages	C#, Python, Java, C, C++, R, Go, PHP
Frontend	HTML5, CSS3, JavaScript
Databases	SQL Server, MySQL, SQL (query optimization, schema design)
Architecture	MVC, 3-Tier Architecture, OOP, DSA, Enterprise Application Design
Tools & Platforms	Git, GitHub, Visual Studio, VS Code, Kaggle
Soft Skills	Agile Collaboration, Public Speaking, Leadership, Critical Thinking

RESEARCH

Brain Tumor Classification Using Fusion Deep Learning (Under Review) *Mar 2026*

- Designed a fusion deep learning architecture combining MobileNetV2 and EfficientNetB0 for multi-class MRI-based brain tumor classification, achieving high diagnostic accuracy on real medical imaging datasets.
- Applied transfer learning and fine-tuning strategies to maximize model generalization on limited medical imaging data, implemented Grad-CAM visualizations to provide clinical interpretability and explainability.
- Documented the complete ML pipeline data preprocessing, augmentation, model training, and evaluation, enabling full reproducibility and peer review.

KEY PROJECTS

Dustbin Fill Level Monitoring System (Industry Project) *Feb 2026 - Apr 2026*

- Architected a smart waste management platform for railway stations using Django, Celery, and YOLOv8 for real-time fill-level detection, achieving more than 97% classification accuracy across 5 fill states.
- Designed and implemented JWT-secured RESTful APIs for managing stations, cameras, dustbins, and maintenance logs. Also integrated Swagger for auto-generated API documentation.
- Built an asynchronous image-processing pipeline (IP camera ingestion → YOLOv8 inference → MySQL storage) orchestrated via Celery and Redis, enabling offline and Roboflow cloud deployment modes.
- ***Technologies*****:** *Python, Django 4.2, DRF, Celery, Redis, YOLO, MYSQL, Swagger, Git*

Cow Weight & Identification System (Industry Project) *Feb 2026 - Apr 2026*

- Designed a multi-stage AI pipeline for automated cattle detection, biometric muzzle recognition, and weight estimation, enabling scalable real-time livestock monitoring on farms.
- Implemented YOLOv5m for cow detection (~95% accuracy) and YOLOv8n for muzzle localization (97.8% accuracy), feeding a CattleNet weight prediction model (~92% accuracy).
- Developed cow identity recognition using WideResNet50 and ArcFace, reaching 98.59% validation accuracy and a final validation loss of 0.0054, enabling reliable biometric cattle tracking.
- Built an end-to-end inference pipeline: detection → muzzle extraction → feature embedding → identity matching → weight prediction, architected for real-time throughput and scalable deployment.
- ***Technologies:*** *PyTorch, YOLOv5/v8, WideResNet-50-ArcFace, CattelNet, OpenCV, NumPy, Pandas, SQL Server, Redis, REST APIs, Git*

TaskSyncPro (Enterprise Task Management Platform) | GitHub *Jan 2026*

- Architected and delivered a full-stack task management platform using ASP.NET Core with a strict 3-tier architecture, improving code separation and enabling independent scaling of business logic.
- Designed and optimized a SQL Server relational database schema supporting multi-user task tracking, role-based access, and real-time collaboration features.
- Implemented secure authentication and authorization middleware, ensuring data integrity across all API endpoints.
- ***Technologies:*** *C# , ASP.NET Core, SQL Server, REST APIs, Git*

AIUB Course Management System | GitHub *Jul 2024 - Jun 2025*

- Engineered a Windows desktop application in C# (.NET Framework) to automate course selection, validation, and academic record management for university administrators.
- Reduced manual data entry errors by implementing server-side validation logic and a structured, role-aware UI workflow.
- ***Technologies:*** *C#, .NET Framework, SQL Server*

Green Tea & Coffee Shop (E-Commerce Website) | GitHub *Dec 2024 - Jan 2025*

- Developed a fully responsive e-commerce platform with a product catalog, cart system, and admin dashboard for real-time inventory and order management.
- Integrated a MySQL database backend with secure query handling, preventing SQL injection and ensuring efficient data retrieval under concurrent user loads.
- ***Technologies:*** *HTML5, CSS3, JavaScript, PHP, MySQL, Git*

Blood Donor Management System | GitHub *Jul 2024*

- Engineered a .NET Framework desktop application for donor registration and search, featuring email and SMS verification to ensure data authenticity and prevent duplicate registrations.
- Implemented real-time donor lookup by blood group and location, enabling fast matching between donors and recipients in time-critical scenarios.
- ***Technologies:*** *C#, .NET Framework, SQL Server*

VOVO (Smart Transit Management System) | GitHub *Jul 2024*

- Designed a role-based .NET desktop system (Admin, Employee, Customer) with automated email/SMS ticketing, dual-factor registration verification, and fleet & route scheduling.
- Integrated automated communication workflows (email delivery, SMS-based authentication), reducing manual administrative tasks by eliminating paper-based ticketing.
- ***Technologies:*** *C#, .NET Framework, SQL Server*

CERTIFICATIONS

- **Introduction to SQL** | Simplilearn | View Certificate *Mar 2025*
  Database querying, data retrieval, schema management
- **Introduction to Artificial Intelligence** | Simplilearn | View Certificate *Nov 2024*
  AI fundamentals, ML concepts, neural networks, Python programming

LEADERSHIP & ACTIVITIES

Organizing Secretary | Ideal College Debating Club (ICDC) *Feb 2022 - Mar 2023*

- Coordinated college-level debate events and training workshops. Also managed logistics, scheduling, and cross-team communication for competitions with 100+ participants.

General Secretary | Motijheel Model Debating Club *Jul 2019 - Jul 2021*

- Led inter-school and intra-school debate competitions, mentored 20+ members in public speaking and argumentation, strengthening leadership and event management skills transferable to technical team environments.