

## SKILLS ↗

<b>Language</b>	Java, Python, C, C++, Solidity, Git, $\LaTeX$ , C#, Bash, PHP, JavaScript, Matlab, SQL, Assembly(x86)
<b>Frontend</b>	HTML5, CSS, JS, Bootstrap, React
<b>Backend</b>	Flask, Django, ASP.NET Core, Node.js
<b>Database</b>	MySQL, Firebase, MongoDB
<b>IOT &amp; Robotics</b>	RTOS development, Arduino, Raspberry PI, Jetson Nano & Xavier, LIDAR, ZED-Stereo Cam, ESP-32, PX4 (Pixhawk), ROS, ROS2, MAVROS
<b>App Development</b>	Flutter, Dart
<b>Soft Skills</b>	English (business), Bengali (business)
<b>Pentesting Tools</b>	Burp Suite, Metasploit, NMap, SQLMap, Wireshark, Nessus, John The Ripper, Hashcat, Dirb, Volatility, Parrot OS
<b>Other</b>	DSA, OOP, Containerization, Networking & Linux, PyTorch, GCP, AWS, CI/CD, TensorFlow, Git, Docker, Office Tools

## PROJECTS | CERTIFICATIONS ↗

**MIST Mongol Barota (An autonomous rover) 2021 - 2023**  
*Mars Society's University Rover Challenge (URC) USA*  
*Anatolian Rover Challenge (ARC) UKET, Turkey*  
Tech Stack ROS, Robotics, ML, Autonomy, Python, Flask, R&D

**Pretrained CNN-based Dog Classifier | Code | Certificate**  
Tech Stack Python, ResNET, VGG16, Machine Learning

**NLTK LSTM Based HateSpeech Detection | Code**  
Tech Stack ML, NLP, LSTM, Python

**Bus Counter Management System Using JavaFX | Code**  
Tech Stack Swing, JavaFX, Java, Spring Boot

**MERMS | Code**  
Tech Stack HTML, CSS, React.JS, Vue.js, PHP, OracleDB

**Simple weight machine using HX711 and Arduino | Code**  
Tech Stack Arduino, IOT, HX711 sensor

**SoccerBot**  
Tech Stack Arduino, C++

**DekhboKinbo | Code**  
Tech Stack C#, .NET Core MVC, Entity, MySQL

**Alumni Information Management System | Code**  
Tech Stack C#, MySQL

**Blockchain-based Land Record management system with biometric authentication | Blockchain (Contract) | Website**  
Tech Stack Blockchain, Django, IOT, Jira, Manual testing

**PyTorch-Create Your Own Classifier | Code | Certificate**  
Tech Stack Python, CNN, Machine Learning, AWS, Udacity

## RESEARCH & PUBLICATIONS (5+) ↗ | SCHOLAR ↗

• DeepTriNet: A Tri-Level Attention Based DeepLabv3+ Architecture for Semantic Segmentation of Satellite Images. [Link](#) [got the best paper award]

- Performance Analysis of Various EfficientNet Based U-Net++ Architecture for Automatic Building Extraction from High Resolution Satellite Images. [Link](#)
- CycleGAN-Based Data Augmentation with CNN and Vision Transformers (ViT) Models for Improved Maize Leaf Disease Classification. [Link](#)
- Biomolecular Analysis of Soil Samples and Rock Imagery for Tracing Evidence of Life Using a Mobile Robot [Accepted at ICRAIE - 2023]
- Enhancing Mango Leaf Disease Classification: ViT, BiT, and CNN-Based Models Evaluated on CycleGAN-Augmented Data. [Link](#)
- SecureLandChain: A Blockchain-Based Land Registry System with Biometric Authentication and Certificate Verification System [Submitted for a Q1]
- Automatic Literature Review Generation : An Improved LLM-RAG Based Solution Embedded With Regex and T5. [Thesis]

## EXPERIENCE ↗

**Software & Autonomous System Developer 2021 - 2023**  
*Mars Society's University Rover Challenge (URC) USA*  
*Anatolian Rover Challenge (ARC) UKET, Turkey*

- Developed an autonomous rover system with my team for URC-2021 competition **champion globally beating 88 teams.** [Link](#).
- Upgraded the autonomous rover system for ARC-2022 competition **became third among 14 final contestant countries.** [Link](#)
- Achieved a total of 50,000+ USD fund from Government & Non-Govt Sources.
- Software & Autonomous Team Lead For URC-2023 & ARC-2023 (2nd in Asia, 5th Globally)

**Industrial Trainee Jan 2023 - Feb 2023**  
*Brainstation 23 Mirpur DOHS, Dhaka*

- Acquired expertise in C# and ASP.NET MVC through Brainstation 23's LMS, culminating in the development of a feature-rich desktop application.
- Executed two ASP.NET web-based projects, demonstrating proficiency in full-stack development and responsive design principles.
- Delivered end-to-end solutions in a project-based learning environment, reinforcing software development lifecycle skills and best practices.

[Stackoverflow](#) ↗ | [AskUbuntu](#) ↗  
Provided 4 solutions

- Solution links : [1](#) [2](#) [3](#) [4](#)

**Competitive programming 2020 - Present**  
• Solved over 250+ problems on GeeksForGeeks, Codeforces and Leetcode

## EDUCATION ↗

**B.Sc in Computer Science and Engineering 2020 - 2024**  
*Military Institute of Science and Technology*

**Higher Secondary School Certificate 2017 - 2019**  
*Barishal Cadet College*