Deabashis Sarker Tamal

Inspirational researcher and engineer currently doing a Master of Science in Internet of Things and Robotics Engineering. Has such experience teaching, full-stack development and is deeply involved with embedded systems, autonomous robotics and AI-driven software-hardware integration. Patent holder of an autonomous food delivery robot. Committed to research, mentoring and innovation focused on connecting academic theory and real-world practice.

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EDUCATION

M.Sc. in Internet of Things and Robotics Engineering — (July 19, 2025 - Present)
University of Frontier Technology, Bangladesh — Running

B.Sc. in Software Engineering — (January 01, 2020 - February 13, 2024)
Daffodil International University, Major: Robotics and Embedded Systems — 3.23

Shaheen College — (July 01, 2016 - June 11, 2019)
HSC, Science — 3.92

Anuhola High School — (January 01, 2014 - May 16, 2016)
SSC, Science — 4.83

PROFESSIONAL EXPERIENCE

Bangladesh Biology Olympiad — (January 14, 2025 - Present)
Olympiad Coordinator

- Successfully coordinated the entire BdBO program in 2025, overseeing national and regional events.
- Managed end-to-end planning, communication and logistics, ensuring smooth execution of competitions, training camps and evaluation processes.

Software Engineer — (January 08, 2024 - Present)
VI Tech (Startup)

- Developed and maintained a POS system with responsive, user-friendly sales dashboards, billing screens, and inventory management interfaces using React.js, Tailwind CSS, Express.js and MySQL with Prisma.
- Implemented real-time API integrations for product, transaction and customer data synchronization.
- Led the development of OLMS, integrating custom quiz generation, math equation support and user analytics, improving student engagement by 30%.
- Worked on the backend system of InternBD, optimizing internship matchmaking for students and employers.

Founder & Chief Operating Officer — (July 19, 2019 - Present)
Anun (Startup)

- Developed Android applications (Java) and backend systems (PHP) for a super app that transitioned from food delivery to social commerce.
- Led UI/UX efforts, ensuring design consistency and brand alignment.
- Implemented CI/CD pipelines for faster updates and automated deployments.
- Integrated IoT-based systems for automation and smart solutions.

Front-End Developer — (August 09, 2020 - December 24, 2023)
OMEGA Express

- Designed and developed responsive UI/UX for business solutions.
- Worked closely with backend teams to integrate APIs and ensure seamless functionality.

RESEARCH & INNOVATION

Secured food delivery system and method using an autonomous mobile robot in outdoor settings
Patent No: 1006967, IPCs: B 60W 60/00, Filing date & Number: 09/07/2024 BD/P/ 2024/210

My Role: Software Development for the Robot, Software Integration

A new autonomous food delivery robot that is inspired by efficiency and cost-effectiveness. It has six honeycomb wheels to improve mobility, GPS navigation and obstacle avoidance, and a number of cameras to read the environment. A Robot Management System (RMS) is a solution that allows real-time monitoring, handling of orders, and job allocation, and a client verification application that guarantees secure deliveries. This system will solve some of the most important issues in outdoor autonomous robotics and establish a new standard of providing food on demand with great reliability because it is low-cost and scalable.

🔗 https://dpdt.portal.gov.bd/sites/default/files/files/dpdt.portal.gov.bd/page/37e77d07_22a8_4a82_b27b_6a5c 84d7cc4f/2025-09-10-07-02-70bdc43de9679959e4ab8e8dae671cc4.pdf#page=32

PROJECTS & ACADEMIC WORK

GPS-Based Vehicle Tracking & IoT Emergency Response System

- Developed a GPS-enabled vehicle tracking and management solution integrating in-vehicle sensors (accelerometer, gyroscope, vibration, GPS) with IoT for real-time accident detection. Implemented automatic SMS alerts to emergency services, stakeholders and contacts, with cloud-based data analysis to improve safety protocols and support insurance processes. Enhanced road safety by enabling rapid response, accident hotspot identification and data-driven policymaking. It will reduce accident response time by 40%.

🔗 https://youtu.be/ouT7kVUUsEk

Bangladesh Biology Olympiad - IT Coordinator
Created an online exam platform and automated registration systems for students.

- Hosted and managed Windows-based servers for smooth exam delivery and real-time analytics for scaled online exam and registration platforms on Azure Cloud, successfully supporting 10,000+ concurrent users during COVID-19. Ensured system reliability, security and backup during national-level Olympiad events.

Byte Virus
URL Shorter

- Byte Virus or bvirus is a URL shortener site. Anyone can shorten url and share the url They can view the redirect history (Country, Devices, Redirects From) and here a user can add an extra URL that redirects users when the main URL gets an HTTP error, also can make a custom URL.

🔗 https://bvir.us/admin/

Mango Disease Detection FastAPI Web Application
Multi-Model Deep Learning Approach

- Implemented 5 different machine learning models for mango disease classification:
  - Basic CNN Model
  - InceptionV3 (transfer learning)
  - VGG16 (transfer learning)
  - Random Forest + VGG16 (hybrid approach)
  - KNN + VGG16 (hybrid approach)

🔗 https://github.com/dsttamal/MangoDiseaseDetection

Malabar Spinach & Eggplant Disease Detection FastAPI Web Application

- YOLOv8 Model Training and Deployment: The project involves training a YOLOv8 model for object detection using a custom dataset. It includes data preparation, model training, evaluation and inference visualization.

- **API for Object Detection:** A FastAPI-based backend is implemented to serve the trained model, allowing users to upload images for predictions, retrieve annotated results and perform batch processing.
- **End-to-End Workflow:** The project automates the entire pipeline, from dataset configuration to deploying a functional API, ensuring scalability and ease of use.

🔗 https://github.com/dsttamal/leaf_diseases

TEACHING EXPERIENCE

Co-Instructor – Full-Stack Web Development-Pro (July 10, 2025 - Present)
Daffodil International University, Micro-Credentials Academy

Delivered 72-hour course covering HTML, CSS, Tailwind, JavaScript, React, Vue, Node.js, Express, Laravel, WordPress, GitHub, MySQL, PostgreSQL, VPS, cPanel. Conducted hands-on coding labs, live projects and mentoring sessions. Introduced coding with AI tools and MERN stack applications.

Guest Teacher (January 07, 2024 - February 13, 2025)
Haji Ismail Kha Non-Govt. Technical College (EIIN - 138679)

"Digital Technology in Business" is an HSC (BMT) technical subject, which includes content related to graphics design, graphics design software, hardware and other applications of digital technology.
"Computerized Accounting System" is an HSC (BMT) technical subject that equips students with computer-based accounting skills. The objective of this course is to prepare students by utilizing digital technologies essential for the Fourth Industrial Revolution.

INTERESTS

UI/UX Design & Prototyping	**Frontend Innovation & Design Trends**
Cross-Platform Development	**Creative Coding**
Open Source Contribution	**R&D in Embedded Systems**
Cybersecurity and Network Security	**Scientific Research & Academic Writing**
IoT & Edge Computing	**Robotics and AI Innovations**
ROS-based Navigation and Path Planning	**Embedded Systems and Sensor Fusion**

SKILLS

Frontend Development	Frameworks & Libraries
HTML, CSS, JavaScript	React.js, Tailwind CSS, Bootstrap

Quality Assurance & R&D Report Writing	Mobile & Web Development
LeTex	React Native (basic), Flutter (exposure), Java (Android)

Integration	UI/UX Design
RESTful APIs, JSON, Git/GitHub, Cross-browser compatibility, CI/CD	Figma, Adobe XD, Illustrator, Photoshop

Database Management	Software Development
MySQL, Firebase	Java, PHP, Python, JavaScript

Server Manage	Networking & Router Configuration
Nginx, Exim, Cpanel, VPS	RouterOS, OpenWrt, Cisco , MikroTik

Embedded Systems & IoT Development	Circuit Analysis & PCB Testing
Arduino, Raspberry Pi, ESP32, Jetson Nano	Proteus

Robotics	Product Prototyping
ROS, Autonomous Navigation, Obstacle Avoidance	3d printing

VOLUNTEER EXPERIENCE

Bangladesh Biology Olympiad (January 01, 2020 - January 13, 2024)
IT Coordinator

Bangladesh Biology Olympiad (BdBO) is a national competition that nurtures students' interest in biology and selects participants for the International Biology Olympiad (IBO). It organizes regional and national contests, along with training camps, to enhance students' knowledge and skills in biological sciences.

Gram Pathagar Andolan
Support Educational Infrastructure

"Gram Pathagar Andolan" has become one of the prominent charitable organizations in Bangladesh. They are working to improve education infrastructure in Bangladesh, especially in remote areas.

LANGUAGES

Bengali

Native

English

Intermadeted