



# Md. Masum Billah

Full-Stack Flutter and Web Developer | IoT • ML & Deep Learning

I am a **Computer Science & Engineering graduate** and a dedicated **problem solver** with a strong track record on **Codeforces** and **LeetCode**. I have hands-on experience in **Full-Stack Development** and **Machine Learning**, with **15+ real-world projects** including mobile apps, web platforms, and intelligent systems.

I specialize in building **real-world, data-driven solutions** by creating **custom datasets**, developing **ML models**, and integrating **REST APIs** for practical applications such as environmental monitoring and smart systems. With experience in **Flutter**, backend development, and **Linux-based deployment**, I bridge the gap between AI research and production-ready software.

My objective is to work as a **Junior Software Engineer** in a **growth-oriented organization** where I can build **scalable and impactful applications** while continuously enhancing my skills in **mobile development**, **web technologies**, and **artificial intelligence**.

## SKILLS

<b>Programming</b>	Python, C++, Java, PHP, JavaScript, Dart, $\text{\LaTeX}$
<b>Frameworks &amp; Tools</b>	Flutter, Laravel, HTML/CSS, Firebase, REST API Integration, IoT Systems
<b>Machine Learning</b>	Computer Vision, Hybrid ML Models, Custom Dataset Creation, Model Evaluation
<b>Data &amp; Research</b>	Data Analysis, Google Earth Engine (GEE), Environmental Data Processing
<b>Problem Solving</b>	Data Structures & Algorithms, Competitive Programming (Codeforces, LeetCode)
<b>Systems &amp; DevOps</b>	Git, GitHub, Docker, Ubuntu/Linux Administration, Windows Environment

## TECHNICAL EXPERIENCE

<b>Hybrid ML-Based Real-Time Road Sign &amp; Vehicle Detection System</b> <i>Computer Vision, Deep Learning</i>	2024–2025
<ul style="list-style-type: none"><li>I created a custom Dataset annotated with 9,133 images and 29 classes of Bangladeshi road signs.</li><li>Implemented a YOLO/Hybrid ML pipeline for real-time sign and vehicle detection.</li><li>Developed a Streamlit-based web application supporting image, video, and live camera inference.</li><li>Optimised performance for crowded and low-light road environments.</li></ul>	
<b>Air Quality Index Monitoring Platform</b> <i>Google Earth Engine(GEE), Weather API, Data Analysis</i>	2025
<ul style="list-style-type: none"><li>Built an environmental monitoring system using Google Earth Engine (GEE).</li><li>Processed satellite data to compute and visualize Air Quality Index (AQI) trends.</li><li>Integrated REST APIs to fetch real-time environmental data.</li><li>Designed dashboards for spatial and temporal analysis of pollution levels.</li></ul>	
<b>IoT-Based Health Monitoring Band With MobileApp</b> <i>Flutter, Firebase, Embedded Systems</i>	2024
<ul style="list-style-type: none"><li>Built a wearable health-monitoring band using ESP8266, MAX30100, GPS, and temperature sensors.</li><li>Developed a Flutter mobile application for real-time data visualization and alerts.</li><li>Integrated Firebase for live cloud synchronization and remote monitoring.</li></ul>	
<b>FoodHaven Flutter-Based Food Ordering App</b> <i>Flutter, UI/UX, State Management</i>	2024
<ul style="list-style-type: none"><li>Developed a complete Flutter app for food ordering and delivery.</li><li>Implemented product listing, cart, OTP authentication, and responsive UI.</li><li>Integrated backend services for order processing and user profiles.</li></ul>	
<b>TrendyTreasure - Online GiftShop</b> <i>PHP, MVC, Web Development</i>	2023
<ul style="list-style-type: none"><li>Developed a full PHP e-commerce gift shop targeting students and professionals.</li><li>Built product catalog, shopping cart, checkout, and admin dashboards.</li><li>Applied MVC architecture and server-side validation.</li></ul>	
<b>Six Seasons – OpenGL Seasonal Animation</b> <i>OpenGL, Computer Graphics, C++</i>	2023
<ul style="list-style-type: none"><li>Designed a graphical simulation showing six seasonal environments using OpenGL.</li><li>Implemented animated elements such as weather, rain, snowfall, and lighting transitions.</li><li>Optimized rendering performance and scene composition for smooth visualization.</li></ul>	

## EDUCATION

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### Bachelor of Science in Computer Science & Engineering

*Bangladesh University of Business and Technology (BUBT)*

Jan 2022 – Dec 2025

CGPA: 3.67/4.00

*Relevant Coursework:* Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Software Engineering, Computer Networks, Machine Learning, Artificial Intelligence, Operating Systems, Cyber Security & Forensic Digital, Internet of Things(IoT), Computer Network.

## COURSES AND CERTIFICATIONS

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- Beginner's Guide to Competitive Programming using C++ — Udemy 2022
- Mastering Java SE Programming: From Beginner to Master — Coursera 2023
- Flutter & Dart: The Complete Guide — Udemy 2024
- Machine Learning A-Z™: AI, Python & R + ChatGPT Bonus — Udemy 2025
- The Complete JavaScript Course: From Zero to Expert — Udemy 2025

## ACTIVITIES

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Contestant, ICPC Asia Dhaka Regional Contest – BUBT (Preliminary Round)	2023
Contestant, BUBT Intra University Programming Contest	2023
Volunteering, ICPC Asia Dhaka Regional Contest – BUBT [Main Event]	2023
ICT Lead, ESAB BUBT Unit	Fall 2023- Spring 2024
Strategic Member, BUBT IT Club	2024
First Place, <i>Brainstorming</i> – Project Showcase	Spring 2024
First Place, <i>Brainstorming</i> – Poster Presentation on Machine Learning	Spring 2024
First Place, <i>Brainstorming</i> – Research Paper Presentation	Fall 2025
Volunteering, Technical Team Lead, ICPC Asia Dhaka Regional Contest – BUBT [Main Event]	2025

## REFERENCES

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### Md. Ashraful Islam

Assistant Professor,

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