

# Iftekharul Islam

DevSecOps Engineer | Full-Stack Web App Developer | GameDev | Cybersecurity Enthusiast

[Github](#) | [LinkedIn](#) | [Email](#) | [Phone](#)

## Experience

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### DevSecOps Engineer

*Aug. 2025 – Present*

*Cyber Range (MIST)*

- Created the comprehensive platform for hosting SOC Analyst training, and the complete course structure that aligns with industry standards and real-world cyber-threat scenarios in the Cyberrange GameNet in supervision of SOC Analysts and Cybersecurity experts.
- Deployed and manage enterprise VMware ESXi infrastructure for the Cyber Range simulations
- Managed the complete SOC workflow integration including WAF (ModSecurity), SIEM (Wazuh), IDS/IPS (Suricata/Evebox), YARA-based detection, OP NSense firewall rule management, Teler network monitoring, and real-time monitoring dashboards.
- Built comprehensive offensive attack infrastructure from scratch with multiple real world cyber attack scenarios: DDoS attack system with custom C2 server and multi-VM botnet orchestration; ransomware simulator with custom C2, agent deployment, and file encryption pipeline; automated web exploitation suite following the Cyber Kill Chain steps with real-time updates in the GUI dashboards and automation, developed in-house due to procurement constraints.
- Architected and developed 4 full-stack team portals (Red,Blue,Green,White teams) for an all-in-one platform for attack orchestration, defense training, infrastructure management and oversight.
- Integrated industry-standard frameworks: MITRE ATT&CK, MITRE D3FEND, NIST framework; developed and maintained custom offensive tooling and Kali attack automation in-house due to procurement constraints.
- Created real-time attack visualization dashboard with distributed DDoS orchestration and WebSocket-based live attack monitoring, with secure shell access.

### Embedded Software Engineer

*July 2025 – Present*

*SILICONOVA*

- Linux Real-Time (RT) kernel patching, configuration, and performance optimization.
- Development and tuning of the Ethernet protocol stack, including DMA and memory-mapped I/O configuration.
- Device Tree configuration and low-level driver development & integration.
- Interfacing with ARM SoC architectures (PS/PL) for embedded systems.
- FPGA integration: bitstream management and dynamic hardware reconfiguration.
- Leading system integration, regression testing, and debugging in complex networked environments.
- Designing and implementing optimized network topologies and embedded communication protocols.

### Fullstack Software & DevOps Engineer (Contractual)

*Nov. 2024 – July 2025*

*Parents Care Ltd.*

- Worked on the Development, deployment and legal issues regarding 2 cross-platform apps (user, caregiver) using Flutter, with an Elysia.js backend and PostgreSQL database, hosted on a VPS, as well as the Admin panel and website developed in Next.js, Node.js, tailwindcss, and PostgreSQL database.

## President & SWE

*MIST Cybersecurity Club*

*Mar. 2025 – Present*

- Lead all club operations, course & ctf management, manage executive panels & members, and coordinate national cybersecurity events with the CSE dept.
- Manage technical infrastructure, including a cyber range and development of club platforms ([MCSC Portal](#), [Student Welfare](#), [MIST Pioneers](#)).
- Also worked as Vice president from 2024 where I Co-managed club activities, organized seminars/CTF events, and performed SWE/DevOps duties for the club's digital platforms (listed above).

## Software Engineering Intern

*ADN DigiNet Limited*

*May 2025*

- Developed backend (Python/FastAPI) and mobile (Flutter) applications with a PostgreSQL DB, contributing to system architecture design and AI feature integration.

## Software & Autonomous Team Member

*MIST Mars Rover*

- Handled autonomous navigation and software tasks
- toolset C++, Python, ROS, OpenCV, Gazebo. ([ARC Cert.](#))

## Education

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### B.Sc. in Computer Science and Engineering

*Military Institute of Science and Technology*  
CGPA: 3.63

### Higher Secondary School Certificate (HSC)

*Dhaka Board (Science Stream)*  
GPA: 5.0, Avg. 96%

## Achievements

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- **Runners-up, National CyberDrill 2025** (WTISD Hackathon) - rank 5th (tie with 3rd, 4th team, having same points)
- Best junior team – MIST Leetcon CTF 2023
- Host, Problem-setter: CyberTron 2025, MIST intra-dept CTF and intra-MIST CTF
- **Champion** - MIST Intra-Dept Cybersec & CTF challenges (2023)
- 3rd - CyberBangla ByteBrigade CTF (2024)
- 5th (ARC'23) with SWA team Mongol Barota
- 9th – EWU National Robofest CTF 2024
- 13th – SMP National CTF 2025
- 18th - CyberRaid 2025

## Recent Projects

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[View all my Projects](#) (public: 44, total: 83)

### MIST Cyber Range (Enterprise Platform)

- **Description:** Enterprise-level on-premise cyber range platform for realistic red/blue team training, SOC operations, adversary emulation, and ML-based intrusion detection research.

- **Architecture:** Multi-tier VMware infrastructure with isolated network segments; Hybrid backend (FastAPI + Django + PostgreSQL); 4 team-specific Next.js/React portals; Real-time WebSocket communication for live attack monitoring.
- **Attack Infrastructure:** SSH-based remote execution engine; MITRE ATT&CK integration via Atomic Red Team; CALDERA adversary emulation with APT profiles; Comprehensive Kali Linux automation (SQLMap, Hydra, Nmap, Burp Suite, OWASP ZAP, BeEF); Distributed DDoS orchestration; Infection Monkey ransomware simulation.
- **Defense/SOC Stack:** Wazuh SIEM with real-time alerting and correlation; Suricata/Evebox IDS/IPS for signature-based detection; Custom monitoring dashboards; Remote VM access capabilities; File integrity monitoring; Network traffic analysis.
- **Vulnerable Applications:** Custom-built Flask application with comprehensive OWASP vulnerabilities (SQLi, XSS, CSRF, BOLA/BOPLA, file upload, SSRF, LLM injection); Integration with standard penetration testing platforms (DVWA, bWAPP, OWASP Juice Shop).
- **ML Pipeline:** Automated intrusion detection dataset generation with large-scale network flow capture; CICFlowMeter feature extraction (83 features per flow); Trained 4 classifiers (Random Forest achieving 98%+ accuracy); Benign traffic simulation; Multi-class attack labeling.
- **DevOps:** Multi-environment deployment strategy; Docker containerization; Nginx reverse proxy; SSL/TLS configuration; Automated backup and disaster recovery; Zero-downtime deployment pipelines; Infrastructure as Code practices.
- **Key Features:** Real-time attack log streaming; MITRE ATT&CK technique mapping; Cyber Kill Chain workflow automation; Interactive network topology visualization; Automated trainee management and grading; Performance analytics and leaderboards.
- **Tech Stack:** Next.js 15, React 18, TypeScript, Python (FastAPI, Django, Flask), Node.js (Express, Fastify), PostgreSQL, Keycloak (OAuth2/OIDC), WebSocket, Tailwind CSS, shadcn/ui, Material UI, Scikit-learn, CICFlowMeter, Pandas.

### Athlytiq App

- **Description:** A full-stack social fitness platform empowering users to track workouts and meals, connect with trainers, shop for fitness gear, and engage in a community.
- **Tech Stack:** Flutter, FastAPI, Supabase, PostgreSQL, Riverpod, OCR/AI for meal scanning.
- **Live:** [Google PlayStore](#)

### Parents Care Apps

- **Description:** Fullstack apps for Parents Care limited providing caregiver services with features including 2-way user-caregiver communication, reporting, real-time updates, payment generation, scheduling, and prescription scanning.
- **Tech Stack:** Flutter, Elysia.js (Bun runtime), PostgreSQL, Gemini Flash model (AI), Linux VPS.
- **Publishing:** Process ongoing for Google Play Store Apple App Store.

### Hacker's Lair (MCSC Official CTF Site)

- **Description:** Official cybersecurity platform for CTF challenges with features for user/team challenges, custom CMS, and admin management.
- **Tech Stack:** React, Tailwind CSS, Jinja2, Node.js (Express), Flask, Oracle 21c, MySQL.
- **Website:** [cybertron.shalish.xyz](https://cybertron.shalish.xyz)

### Shalish.xyz

- **Description:** Web-based platform democratizing legal resources through legal document templates, location-based lawyer search, case tracking, document filing, and Generative AI legal assistance.
- **Tech Stack:** Next.js (React.js), Elysia.js (Bun), PostgreSQL, LLM legal assistant (Gemini API).
- **Website:** [shalish.xyz](https://shalish.xyz)

## Technical Skills

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- **Programming Languages:** Python, JavaScript/TypeScript, C/C++, Java, Dart, Bash, Assembly (8086, x86)
- **Web Frameworks:** Next.js 15, React 18, FastAPI, Django, Express.js, Fastify, Flask, Elysia.js (Bun), SvelteKit
- **Cybersecurity & SOC:** MITRE ATT&CK Framework, CALDERA (Adversary Emulation), Atomic Red Team, Wazuh SIEM, Suricata/Evebox IDS/IPS, Kali Linux Tools (SQLMap, Hydra, Nmap, Burp Suite, OWASP ZAP, BeEF, Wireshark), Metasploit, tcpdump, PCAP Analysis, Penetration Testing, Vulnerability Assessment
- **DevOps & Infrastructure:** Docker, VMware, Linux Server Administration, Nginx, SSH/Paramiko, WebSocket, Network Configuration, DNS, VPN, Firewall Management, CI/CD, Git, Automated Deployment
- **Machine Learning:** Scikit-learn (Random Forest, Decision Tree, SVM, Neural Networks), Pandas, NumPy, CICFlowMeter, Feature Engineering, Dataset Generation, Model Training & Evaluation
- **Databases:** PostgreSQL, MySQL, Oracle DB, SQLite, Firebase (NoSQL), Supabase, Database Design & Optimization
- **Authentication & Security:** Keycloak, OAuth 2.0, OpenID Connect, JWT, Session Management, SSL/TLS, Encryption
- **Real-Time Communication:** WebSocket, Server-Sent Events (SSE), Socket.io, Real-time Monitoring Dashboards
- **Mobile Development:** Flutter (Dart), Riverpod, Cross-platform Apps (iOS/Android)
- **Game Development:** Unreal Engine 5, Unity, Construct 2, Game Physics, AI Pathfinding
- **Embedded Systems:** ESP32, Arduino, ESP8266, 8086 Microcontroller, Hardware Interfacing
- **Scripting & Markup:** Bash, PowerShell, PL/SQL, LaTeX, HTML5, CSS3, XML, YAML, JSON
- **Design & Tools:** Figma, Tailwind CSS, Material UI, shadcn/ui, Three.js, Photoshop, VS Code, IntelliJ IDEs, JavaFX

## Soft Skills

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- **Effective Communication:** Clearly articulates technical concepts to both technical and non-technical audiences.
- **Team Collaboration:** Works seamlessly in diverse, cross-functional teams.
- **Problem-Solving:** Excels in critical thinking and innovative troubleshooting.
- **Adaptability:** Quickly learns new technologies and adapts to evolving project requirements.
- **Time Management:** Prioritizes tasks effectively to meet deadlines in dynamic environments.