

# Rafsun Jany Arman

[rafsun.arman@gmail.com](mailto:rafsun.arman@gmail.com) | [rafsunjanyarman.com](http://rafsunjanyarman.com)

[linkedin.com/in/rafsun-jany-arman](https://linkedin.com/in/rafsun-jany-arman) | [github.com/rjarman](https://github.com/rjarman) | [medium.com/@rafsunjanyarman](https://medium.com/@rafsunjanyarman)

## EXPERIENCE

<b>Senior Software Engineer</b> <i>SELISE Group</i>	Nov. 2025 – Present <i>Dhaka, Bangladesh (Hybrid)</i>
<ul style="list-style-type: none"><li>Architected a secure, on-premise <b>Enterprise Generative AI Ecosystem</b> (Web, Mobile, Backend) using <b>LangGraph</b>, <b>Redis</b>, and <b>WebSockets</b>, optimizing resource utilization to reduce inference latency by ~15% while enabling comprehensive real-time communication.</li><li>Engineered a robust <b>RAG</b> pipeline utilizing <b>Qdrant</b> and <b>LangChain</b> to process complex file structures, delivering context-aware LLM responses with high precision based on private enterprise data.</li><li>Orchestrated a <b>Multi-Agent System</b> integrating STT/TTS and specialized agents (via <b>Perplexica</b> and <b>SearXNG</b>) for real-time web search capabilities beyond static training data.</li><li>Developed a high-concurrency <b>Collaborative Chat Engine</b> with secure link-sharing and dynamic participant management using <b>FastAPI</b> and <b>SignalR</b>, streamlining group problem-solving.</li></ul>	
<b>Software Engineer</b> <i>SELISE Group</i>	Nov. 2023 – Nov. 2025 <i>Dhaka, Bangladesh (Remote)</i>
<ul style="list-style-type: none"><li>Developed the all-in-one <b>Ski World Cup App</b> using <b>Flutter</b> and <b>Bitmovin</b>, delivering sub-3s latency live streaming and real-time athlete telemetry for over 30k users.</li><li>Built a dynamic <b>Maritime Data Visualization Dashboard</b> for a global marine services client, enabling predictive alerts and efficient data filtering across multiple operational systems.</li><li>Engineered a scalable <b>IoT Middleware</b> using <b>Java Spring Boot</b>, <b>RabbitMQ</b>, and <b>TimescaleDB</b> to orchestrate millions of telemetry messages for Smart Metering and Industrial use cases.</li><li>Designed end-to-end <b>Smart Metering Integration</b> solutions, automating data collection from diverse hardware protocols to optimize utility consumption analysis.</li></ul>	
<b>Junior Software Engineer</b> <i>SELISE Group</i>	Aug. 2022 – Oct. 2023 <i>Dhaka, Bangladesh (Hybrid)</i>
<ul style="list-style-type: none"><li>Extended an <b>IoT Commodity Tracking Platform</b> for a leading mining company, ensuring accurate shipment monitoring and bag condition tracking across international ports.</li><li>Created a <b>Production Cost Monitoring System</b> for a Swiss food manufacturer, utilizing IoT data to track electricity usage and streamline operational efficiency, resulting in reduced waste.</li><li>Enabled <b>White-Label IoT Solutions</b> by developing customizable branding tools and rule chains, allowing B2B clients to tailor platforms to specific operational branding needs.</li></ul>	
<b>Intern Software Engineer</b> <i>SELISE Group</i>	Mar. 2022 – Jul. 2022 <i>Dhaka, Bangladesh (Remote)</i>
<ul style="list-style-type: none"><li>Conducted R&amp;D on <b>ThingsBoard IoT</b> platform features and designed custom D3.js data visualization graphs to meet specific client reporting requirements.</li><li>Published an NPM package for file uploads in <b>NativeScript</b> (Android API <math>\geq 30</math>) and identified security vulnerabilities in internal systems, earning recognition.</li></ul>	

## RESEARCH

<b>Fish classification using saliency detection</b>   <i>Computer Vision, U2-Net, HOG</i>	
<ul style="list-style-type: none"><li>Developed a fish classification system utilizing saliency detection (depending on shape and texture) and ensemble learning (KNN, SVM, etc.), achieving up to 100% accuracy on local fish datasets.</li></ul>	
<b>Fish Observatory and Census System (FOCS)</b>   <i>Image Processing, Research</i>	
<ul style="list-style-type: none"><li>Proposed and implemented a census system for automated fish monitoring and population estimation using advanced image processing techniques.</li></ul>	
<b>Parkinson's Disease Classification</b>   <i>Deep Learning, DenseNet121, InceptionV3</i>	
<ul style="list-style-type: none"><li>Built an image-based detection system using DenseNet121 and InceptionV3 to classify hand-drawn spirals/waves, achieving high accuracy (96.67%) in differentiating healthy vs. affected subjects.</li></ul>	
<b>Bangla &amp; Bus-Mama</b>   <i>NLP, Python, Mobile Dev</i>	
<ul style="list-style-type: none"><li>Created 'Bangla', a Python library for Bengali text processing and lemmatization using Trie data structures.</li><li>Applied the library in 'Bus-Mama', a real-time tracking application with a Bengali-language chatbot for university students.</li></ul>	

## PROJECTS

---

### CrewsBoard | Python, CrewAI, RAG, Multi-Agent

- Engineered an AI agent task management microservice supporting multi-model architectures and multi-tenancy.
- Implemented a RAG knowledge base to enhance agent intelligence and context retrieval accuracy.

### Adaptive Marketing AI | AI/ML, Python, Marketing API

- Built an intelligent marketing engine that interfaces with multiple platforms to generate and deploy targeted ad campaigns based on data-driven insights.

### Canvas | FastAPI, React, CrewAI

- Developed a modern, modular interface for orchestrating AI agents, featuring value-based flow management and visualization.
- Designed a scalable architecture using FastAPI and SQLModel for efficient agent workflow handling.

### Fire-Free | IoT, Angular, Ionic, Node.js

- Created a comprehensive fire safety solution combining hardware sensors (gas/GPS) with a mobile app for real-time alerts.
- Integrated Google Maps for victim location tracking and routing, aimed at improving firefighter response times.

## TECHNICAL SKILLS

---

**Languages:** Python, Java, TypeScript, Dart, SQL

**Frameworks:** FastAPI, Spring Boot, React, Flutter (BLoC, Riverpod), CrewAI, LangChain

**Databases & Cloud:** PostgreSQL, TimescaleDB, MongoDB, Qdrant, Redis, Firestore, RabbitMQ

**Developer Tools:** Git, Docker, LangGraph, Perplexica, SearXNG, Bitmovin

**Concepts:** Generative AI, RAG, Microservices, IoT, Multi-Agent Systems, System Architecture, CI/CD

## HONORS & AWARDS

---

**Language & Knowledge Engineering Lab** | *8th Int. Symposium (LKE 2021)*

2021

**Top 100** | *Idea Contest Mujib 100*

2021

**Honorable Mention** | *CanSat Competition (BRAC)*

2019

**Trainer** | *Mechatronics Club, GSTU*

2019

## EDUCATION

---

**Gopalganj Science and Technology University (GSTU)**

Gopalganj, Bangladesh

*Bachelor of Science in Computer Science & Engineering; CGPA: 3.41*

Jan. 2017 – May 2022