



# MD. Ariful Islam Shakil

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 Chattogram

## EDUCATION

Chittagong University of Engineering and Technology  
B.Sc. in Computer Science and Engineering — CGPA: 3.35

Chattogram, Bangladesh  
2019 – 2024

## SKILLS

**Programming Languages:** Python, C, C++, Java, JavaScript  
**Frontend:** HTML, Tailwind CSS, React JS, Next.JS  
**Backend & Cloud:** Spring Boot, FastAPI, AWS (DynamoDB, S3, EC2)  
**Development Tools:** GitLab (Project Management), VS Code, IntelliJ IDEA, LaTeX, Git, Docker  
**Other Skills:** Machine Learning, Deep Learning, OOP, Data Structures, Algorithms, MySQL, AgenticAI

## EXPERIENCE




**Software Engineering Intern (AI/ML)** — *Cloudly Info Tech* — March 2025 - Present — [GitHub](#)

- Built ML pipelines (preprocessing, EDA, training, evaluation, inference) using TDD practices.
- Contributed to Agentic AI tools for legacy code analysis with **LangChain** and **LangGraph**.
- Worked with LLMs like **LLaMA**, **Mistral**, and **Gemini** via open-source APIs with retrieval-augmented generation (RAG) techniques
- Developed APIs with **FastAPI** and dashboards with **Streamlit** for model deployment.
- Created responsive UIs using **React.js** and **Next.js**, integrated with backend services.
- Used **Git/GitHub** for version control; managed projects via **GitLab** and **Trello**.
- Automated deployment with **CI/CD** workflows for reliable release cycles.
- Leveraged **AWS (DynamoDB, S3, EC2)** for scalable data storage and model integration.
- Containerized applications with **Docker** for consistent dev and deployment.

**Industrial Attachment** — *Synesis IT* — September 2023

- Developed a full-stack CRUD application using React and Spring Boot.
- Designed and implemented RESTful APIs for data management.

## PROJECTS

- **CodeAgent - Repo Refactor Automation** — *FastAPI, Next.js, Groq LLMs, LangChain, GitHub API*
  - Built modular LLM-powered refactor tool with FastAPI backend and Next.js frontend
  - Automated Python upgrades, docstrings, type hints, tests, and README generation using LangChain
  - Integrated LLMs (Llama, mistral, gemini) and GitHub API for batch file refactor, versioning, and PR automation
  - Enabled dependency analysis, update, and validation with real-time feedback
- **Digital Resource Management System** — *FastAPI, React, AWS (S3, DynamoDB), YOLOv8, Pytest* — 
  - Built full-stack employee management app with FastAPI & React
  - Integrated AWS S3, DynamoDB, and YOLOv8 for smart image tagging
  - Implemented CRUD, real-time search, and Pytest-based unit testing
- **Tesla Stock Forecasting** — *Deep Learning, Machine Learning, Python, TensorFlow, Scikit-learn* — 
  - Developed a stock price forecasting system for Tesla using traditional ML and deep learning models
  - Performed end-to-end data preprocessing, feature engineering, and model training
  - Implemented model evaluation and real-time inference for prediction deployment
- **Stock Management System** — *React, Spring Boot, Tailwind CSS, MySQL* — 
  - Designed an inventory management system to track product stock and sales
  - Implemented customer and product management functionalities
  - Built and integrated RESTful APIs for efficient data handling
- **Image Classification** — *Python, Machine Learning*  
Developed a model for classifying images of different people using deep learning. Applied feature extraction and CNN-based classification.
- **Car Price Prediction** — *Python, Machine Learning*  
Extracted and preprocessed car pricing data. Applied Linear Regression to predict car prices based on key attributes.

- **Online Book Shop** — *HTML, CSS, PHP, JavaScript, MySQL*  
Implemented authentication for customers and admins. Developed features for product search, cart management, and order processing.
- **Online Banking System** — *Java Swing, MySQL*  
Built a GUI-based banking system for account creation, transactions, and updates. Ensured secure money transfers between accounts.

## PROBLEM SOLVING

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I have solved 300+ problems on online judges.

**Codeforces** — [Arif.1804072](#) — (Max Rating: 1046)

**LeetCode** — [Arif.CSE18.CUET](#)

## ACHIEVEMENTS

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**Participated in DravidianLangTech@EACL 2024** — **CUET Binary Hackers**

- Malayalam Fake News Detection (3rd in Task 1 & 1st in Task 2) [🔗](#)
- Sentiment Analysis in Tamil and Tulu (3rd in Tamil & 1st in Tulu) [🔗](#)
- **Coursera Course Certificates:** *Machine Learning Specialization* — [🔗](#)

## THESIS

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- **Sensor-Based Activity Recognition** — Python, Deep Learning — [🔗](#)
  - Conducted research on classifying human activities using raw smartphone sensor data (accelerometer, gyroscope).
  - Applied preprocessing steps: cleaning, normalization, segmentation, and windowing for time-series data.
  - Engineered statistical and temporal features to improve model input quality.
  - Developed and trained deep learning models including CNN, LSTM, hybrid CNN-LSTM architectures, and incorporated attention mechanisms to enhance classification accuracy.
  - Evaluated model performance using accuracy, precision, recall, and F1-score on benchmark datasets.