

Arafat Hasan

SOFTWARE ENGINEER · CONTINUOUS LEARNER

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“You become what you give your attention to.”

Summary

I am a software engineer with 4 years of experience building efficient and reliable systems, supported by a strong background in competitive programming with extensive problem-solving expertise. My experience spans backend engineering, DevOps, and machine learning, including work on classification, recommendation, and document review systems. I thrive on tackling complex challenges with clarity, exploring big ideas, and staying curious about everything while pursuing technical excellence with intellectual depth.

Work Experience

Dynamic Solution Innovators

Dhaka, Bangladesh

SOFTWARE ENGINEER (CLIENT: CONSILIO LLC, USA – ENVIZE DEVELOPMENT TEAM)

March 2022 – Present

- Contributed to the design and development of Envize, Consilio's large-scale document classification and Technology-Assisted Review (TAR) platform used in enterprise eDiscovery workflows.
- Developed and maintained three core services:
 - Envize Core (Python):** Implemented ML-driven document similarity and classification pipelines using Gensim, NumPy, and SVM models; improved processing throughput for millions of documents.
 - Envity (Java, Spring Boot):** Built middleware integrations between Envize Core and RelativityOne, ensuring reliable, performant API communication at scale.
 - EnvizeNext (Next.js):** Delivered key UI features enabling seamless user interaction and review operations.
- Led performance optimizations across services, reducing latency and strengthening system reliability under high-volume workloads.
- Designed and maintained Jenkins CI/CD pipelines, automated deployments, and improved DevOps workflows for consistent and fault-tolerant releases.
- Participated actively in architecture reviews, long-term system design decisions, and roadmap planning.
- Coordinated effectively across multiple time zones with Consilio's global teams to resolve operational issues, strengthen platform stability, and drive end-to-end system efficiency.

MATs Inc.

Texas, United States

SOFTWARE ENGINEER, INTERN (REMOTE)

July 2018 – September 2018

- Worked in a four-member engineering team, contributing to data acquisition and automation tasks.
- Contributed to the initial development of a stock market recommendation system, sourcing high-quality financial data from NASDAQ and other market sources via scraping and APIs.
- Built web crawlers and scrapers using Python (Scrapy) and Java Selenium WebDriver to extract structured and unstructured data from diverse sites.
- Performed automated testing using Selenium, validating site functionality.
- Gained hands-on exposure to Jenkins, participating in early CI/CD workflow setup.

Skills & Technologies

Programming Languages

Python, Java, Go, C/C++, Bash, SQL

Frameworks & Libraries

Spring Boot, FastAPI, Flask, Chi (Go), Next.js, Hibernate, Selenium

Domain Expertise Large-Scale Document Review & Classification Systems, Recommendation Systems, Information Retrieval

DevOps & Tooling Linux, Docker, Jenkins, GitHub Actions, CI/CD, Git, Maven, Vim, Travis CI

ML & Data Processing Scikit-Learn, Gensim, NumPy, Pandas, PyTorch, TensorFlow, OpenCV, Matplotlib

Databases PostgreSQL, MSSQL, SQLite, MongoDB

Languages English (Fluent), Bengali (Native)

Education

Mawlana Bhashani Science and Technology University

Tangail, Bangladesh

B.Sc. IN COMPUTER SCIENCE AND ENGINEERING

Jan 2016 – Sep 2021

Projects

auth1

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Modular Authentication Service

Go

- Lightweight, production-ready authentication service with a clean layered architecture.
- Implements secure JWT-based access/refresh tokens with robust rotation and validation logic.
- Strong input validation, structured logging (Logrus), and configuration management via Viper.
- Designed for seamless integration across multiple backend services and scalable deployment.

LexiClass

🔗 /arafat-hasan/LexiClass

Document Classification Toolkit

Python

- Production-ready document classification framework with a modular, protocol-based plugin architecture.
- Ships with 11+ built-in plugins (tokenizers, feature extractors, classifiers) and supports easy custom plugin development.
- Supports end-to-end workflows—indexing, training, prediction, evaluation—with both CLI and Python library usage.
- Streaming index builder for large datasets with token caching for high performance and low memory usage.
- Designed for fast prototyping, scalable ML pipelines, and integration into real-world services.

Problem Solving

🔗 /arafat-hasan/problem-solving

- **Codeforces:** Handle: [arafat_hasan](#), Max Rating: 1434, specialist, 300~ problems solved
- **HackerRank:** Username: [arafat_hasan](#), C++: *Gold level*, Problem Solving: *Silver level*
- **CodeChef:** Username: [arafat_hasan](#), Current 1470, Peak 1552
- **LeetCode:** Username: [arafat_hasan](#), 220~ problems solved
- **UVa:** Username: [859424](#), 370~ problems solved
- **Other Platforms:** Occasionally practiced on [AtCoder](#), [SPOJ](#), [LightOJ](#)
- **National Level On-site Contest:** 15+ national inter-university contests (BUET, IUT, JU, MBSTU, others)
- **Intra University Onsite Contest:** 35+ intra-university contests
- **Cumulative Experience:** 1500+ algorithmic problems solved across major online judges
- **Contests Participated:** 300~ online contests participated
- **Training:** BACS KUET Programming Training Camp 2017

Publications

Intelligent waste management system using deep learning with IoT

[10.1016/j.jksuci.2020.08.016](#)

JOURNAL OF KING SAUD UNIVERSITY – COMPUTER AND INFORMATION SCIENCES, 34(5), 2072–2087.

May 2022

- Led core ML and system design work for a research project that integrates deep learning with IoT for smart waste classification and management.
- Proposed a CNN-based model achieving 95.31% accuracy in classifying degradable vs. non-degradable waste.
- Designed a smart trash-bin prototype using IoT sensors (microcontroller + multiple sensors) for real-time monitoring and data communication via Bluetooth.
- Conducted a System Usability Scale (SUS) evaluation, achieving a score of 86, demonstrating high usability.

Community Involvement

Competitive Programming Trainer

COMPETITIVE PROGRAMMING CLUB, CSE, MBSTU

Tangail, Bangladesh

March 2019 – Feb 2022

- Conducted regular training sessions on algorithms, data structures, and problem-solving.
- Trained students for ICPC and national competitive programming contests.
- Organized specialized workshops and guided students through structured practice.
- Monitored student progress and provided targeted feedback to improve performance.