Md. Mehadi Hasan

Senior Software Engineer — Data Engineering & AI

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PROFESSIONAL SUMMARY

Six years scaling production data platforms processing 10M+ records/day across a 300M+ document index, cutting AWS costs 43% and lifting customer retention 7%. Core strengths: lakehouse architecture (S3 + Iceberg + Athena), OpenSearch optimization, AI agents, MCP, and LLM-based data enrichment.

WORK EXPERIENCE

Senior Software Engineer (Data Engineering & AI) · Goava Sales Intelligence AB Sep 2024 – Present

- Cut AWS costs by **43%** by re-architecting the OpenSearch cluster (**3** fewer data nodes) and tuning Elasticsearch queries, S3 access patterns, and retention; sync time down **200 ms**.
- Drove a **7%** lift in customer retention via an LLM-based profile enrichment system adding 15+ dimensions of data per profile and a robust contacts pipeline raising coverage from **75% to 95%**.
- Built an **MCP server** for natural-language querying and actioning, cutting manual effort by **98%**.
- Shipped top-requested LLM agents for prospecting, signals, and research automation.
- Co-led three zero-data-loss production MySQL RDS major-version **migrations** (5.6 through 8.4).

Software Engineer · Goava Sales Intelligence AB Oct 2022 – Sep 2024

- Architected the core indexing pipeline: **10M+** records/day (3B+/year) across **300M+** OpenSearch docs.
- Designed a scalable Pub/Sub **event bus** streaming user pipeline events into the data lake for real-time analytics, powering a company-matching service with no file-size limit on imports and CRM sync.

Junior Software Engineer · Goava Sales Intelligence AB Nov 2020 – Oct 2022

- Built Scrapy spiders, 25k jobs/day from 12 sites and partner APIs, plus **Indeed** via **residential** proxies.

TECHNICAL SKILLS

- **Languages & Frameworks:** Python, SQL, FastAPI, Pydantic, Pytest
- **Databases & Search:** MySQL (RDS), DynamoDB, Elasticsearch/OpenSearch, Memcached
- **Streaming & Ingestion:** Kinesis, SNS, SQS, EventBridge, Pub/Sub, Scrapy, Playwright, Crawl4ai
- **Transformation & Lakehouse:** ETL/ELT, DBT, AWS Glue, Apache Iceberg, Athena, S3
- **Cloud & DevOps:** AWS (Lambda, ECS, EC2), Docker, Terraform, CI/CD, Microservices
- **AI & LLM:** AI Agents, MCP, LLM Serving, Pydantic AI, LangChain

PROJECTS

- **Hey Jarvis AI Assistant** (pet project) — voice-driven: podcast generation, chess, and math solving.

EDUCATION

BSc in Computer Science and Engineering Mar 2015 – Mar 2019

Shahjalal University of Science & Technology — CGPA **3.81**/4.00, Rank **4th**

CERTIFICATIONS

- Big Data Fundamentals with PySpark (DataCamp) · Intermediate DBT (DataCamp)
- SQL Advanced (HackerRank) · Neural Networks & Deep Learning (Coursera)

ACHIEVEMENTS

- ACM ICPC Dhaka Regional 2018 (63rd of 298)
- Hackathon champion, IUT ICT Fest 2017
- Goava AI Hackathon champion, GOAVA AI Hack Fest 2023