Towhidul Islam

Data Platform Engineer

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Professional Summary

Data Engineer/Staff Software Engineer with 7+ years of expertise in data warehousing solutions, cloud data solutions, and ETL processes. Proven track record in data pipeline development, data architecture design, rapid prototyping, and backend development. Expert in building scalable data engineering platforms across GCP, Azure, and AWS with proficiency in Python, Apache Airflow, BigQuery, and Kubernetes for scalable deployments.

Technical Skills

Programming Languages & Frameworks

Python, SQL, Shell Scripting, C, C++, Java, C#, FastAPI

Data Engineering & Data Science

BigQuery, Apache Airflow, dbt, ETL processes, Data warehousing solutions, Data pipeline development, Data architecture, Data science techniques, LangGraph, LangChain, Haystack, Vertex AI, OpenAI, ChromaDB, SpaCy, NLTK

Cloud Data Solutions & Infrastructure

Google Cloud Platform, Microsoft Azure, Amazon Web Services, Cloud data solutions, Kubernetes, Docker, Terraform, Helm, Keda, nginx, Scalable deployments

Tools & Databases

GitHub Actions, Bitbucket Pipelines, Azure SQL Server, DynamoDB, Redis, Streamlit

Professional Experience

Staff Software Engineer at Cefalo Bangladesh Ltd

Jan 2025 - Present

- Spearheading DN Media Group's data platform modernization from Azure to GCP, successfully migrating 1TB+ data to BigQuery with 100% data integrity and zero downtime
- Architected CI/CD workflows for dbt with incremental builds, reducing deployment time by 60% and eliminating manual interventions while improving data platform reliability through automated testing
- Automated dbt backfill workflows using GitHub Actions and dynamic DAG creation, replacing manual CLI processes with self-service GitHub issue requests, reducing operational overhead by 85%
- Designed Infrastructure as Code using Terraform and Helm for scalable deployments across 5+ Kubernetes environments, improving deployment consistency by 95%
- Leading development of enterprise RAG solutions using LangGraph, LangChain, and Gemini, reducing external AI service dependencies and saving $5,000+ monthly in licensing costs
- Developed an AI-powered transcription platform for journalists using OpenAI Whisper, automating transcription workflows and reducing processing time from 4 hours of manual work to under 5 minutes
- Authored comprehensive API documentation and operational runbooks for 10+ services, improving team onboarding time by 50%
- Led knowledge-sharing sessions with 25+ team members on cloud data solutions and data architecture best practices

Senior Software Engineer at Cefalo Bangladesh Ltd

Feb 2021 - Jan 2025

- Designed and deployed 100+ data pipeline development solutions using Python, Docker, and Airflow KubernetesPodOperator, processing 100GB+ daily data volume
- Migrated Airflow from LocalExecutor to CeleryExecutor, scaling infrastructure to support 100+ concurrent DAGs with 99.8% uptime (improved from 80%)
- Developed real-time data ingestion systems using Azure Functions and EventHub, reducing data latency by 99% (from 4 hours to 2 minutes)
- Created NLP-based article recommendation engine with Spacy, Redis caching, and ChromaDB, improving user engagement by 25% and click-through rates by 18%
- Built a suite of AI-powered content tools using Streamlit and AKS, including automated summarization APIs, article title generation, and specialized chatbots, reducing manual content creation time by 2.5 hours daily
- Built comprehensive CI/CD pipelines with GitHub Actions, integrating automated testing, and reducing deployment errors by 90%
- Developed and maintained 5+ shared Python packages, reducing code duplication by 60% across an 8-person development team
- Optimized ETL processes, reducing data processing time by 45% and improving data quality scores by 30%
- Created technical documentation for data architecture serving as a reference for 25+ stakeholders

Software Engineer (Backend Development) at Workd.ai

Dec 2018 - Feb 2021

- Developed scalable backend architecture with 5+ microservices using Python Falcon framework supporting 50,000+ user profiles and 1,000+ job listings while serving 10,000+ concurrent users with 99% uptime
- Automated AWS ECS scalable deployments via Bitbucket Pipelines, Docker, and ECR, reducing deployment time by 90% (from 30 minutes to 3 minutes)
- Built AWS DynamoDB-based data storage solutions with Redis caching, achieving sub-100ms query response times (85% improvement)
- Implemented NLP-powered candidate-job matching algorithms using data science techniques, improving match accuracy by 40%
- Created notification and email delivery systems using AWS SES, SNS, and SQS, handling 100K+ daily messages with a 99.9% delivery rate

Software Engineer at Enosis Solutions

Feb 2017 - Sep 2017

- Built enterprise .NET WinForms and MVC applications in C# with Entity Framework for healthcare systems
- Developed complex backend development logic using Azure SQL Server stored procedures, optimizing database queries

Education

Bachelor of Science in Computer Science & Engineering
University of Dhaka
2013 - 2017

Strong foundation in algorithms, data structures, data science, and software engineering principles. Represented the university in ACM ICPC Regional Competitions.

Honors & Awards

ACM ICPC Dhaka Regional - 14th Place
2015 • International Collegiate Programming Contest

Bangladesh National Math Olympiad - Regional Champion
2010 • National Mathematics Competition

Competitive Programming Achievement
Codeforces Max Rating: 1850