

Work Experience

Technical Lead of Software Engineering & AI: [Skill Quotient Group](#), Kuala Lumpur, Malaysia Dec 2024 - current

- Lead multiple cross-functional software engineering teams to design and deliver scalable, secure backend systems using **C#, .NET, Python**, Java, and microservices architecture
- Architect and integrate **AI/LLM-based** solutions to enhance automation, system intelligence, and product capabilities
- Oversee end-to-end project delivery, ensuring alignment with business goals, timely execution, and high-quality outcomes
- Provide technical leadership and mentorship to engineers and **team leads**, fostering a culture of **ownership, collaboration**, and continuous improvement
- Drive engineering excellence through implementation of coding standards, **CI/CD pipelines, observability**, and cloud-native best practices
- Collaborate with senior leadership to define and execute technical strategy, innovation initiatives, and talent development plans
- Ensure system **scalability**, performance **optimization**, and **reliability** across distributed architectures
- Manage project priorities, resource allocation, and stakeholder communication across multiple concurrent initiatives

Executive (Technical Lead): [PETRONAS Digital Sdn Bhd](#), Kuala Lumpur, Malaysia April 2024 - December

Project Name: **AI-LNG Document Summarization - Petronas**

- Architected and deployed an enterprise-grade **Retrieval-Augmented Generation (RAG)** platform to automatically summarize **~10** complex LNG technical documents per day (**~30** pages each), eliminating manual review work previously requiring a **10-engineer** team.
- Designed and implemented scalable ETL pipelines in Python and Databricks, processing **~500** MB of operational data daily to feed the RAG model in near real time and ensure high data freshness for decision-makers.
- Integrated **advanced NLP capabilities**—custom embeddings, vectorization, high-performance indexing, and an LLM-driven chat interface—delivering accurate, context-aware summaries for LNG operations and strategy teams.
- Enabled secure ingestion of both **personal** and **company-confidential** documents, ensuring full compliance with Petronas' data-privacy and security policies while processing sensitive information.
- Adopted by **~50 traders** and **analysts** across Petronas, providing critical, real-time insights that support LNG trading strategies and operational decision-making.
- Led and mentored **3 new engineers** and guided the UI team to deliver a production-ready analytics dashboard with automated daily updates for senior management.
- Drove end-to-end technical strategy from data ingestion to model deployment, ensuring the solution met Petronas' oil & gas compliance standards, improved document analysis productivity by an order of magnitude, and established a robust, maintainable platform for future AI initiatives.
- Tools & Technologies: **Python, PySpark**, Delta Lake, Medallion Architecture, Azure DevOps, **Databricks**, pypdf

Project Name: **Jarvis Automation**

- Led a **7-member cross-functional team** to design and deliver a real-time automation platform monitoring **price** and **limit data** across LNG trading operations, ensuring accuracy and regulatory compliance.
- Integrated data feeds from the **ICE trading system** and **Endur platform**, continuously reconciling price data and automatically identifying variances.
- Resolved historical price discrepancies—initially totaling approximately **USD 75 million**—by automating variance detection and resolution, significantly reducing financial risk.
- Implemented **continuous monitoring** of all trades to detect and flag price anomalies in real time, providing traders and risk managers with immediate actionable insights.
- Developed a **limit-monitoring** module to track trader spending limits and automatically send detailed **email alerts** to designated stakeholders whenever a trader approaches or exceeds authorized limits.
- **Directed end-to-end architecture and technical strategy**, coordinating closely with trading and risk-management teams and mentoring engineers to deliver a highly available and maintainable automation solution.
- Tools & Technologies: **Python, Java**, Loki, Grafana, Prometheus, OpenTelemetry, PySpark, Databricks, Azure DevOps, Medallion Architecture

Project Name: **Datathon**

- Led architecture and execution of **2TB+** RDS-to-Databricks migration, improving analytics speed by **40%** and reducing infra cost by **25%**.
- Directed design of scalable ETL pipelines processing **100K+** daily records with zero data loss and full schema integrity.
- Enabled near real-time analytics by integrating streaming data sources into Databricks, reducing reporting lag from **hours** to under **10** minutes
- Mentored **4 engineers** and drove cross-team alignment to deliver on-time migration with **100%** SLA compliance.
- Tools & Technologies: Python, PySpark, Delta Lake, AWS, DBC Workflow, Medallion Architecture, Azure DevOps

Project Name: **Heatmap**

- Led a **7-engineer** team to build real-time forecasting for **10+** commodities, enabling insights for **~100** global traders.
- Designed low-latency caching and autoscaling, achieving **P95** latency **<100ms** under peak traffic
- Architected secure CI/CD pipeline using Git, ECR, Lambda, and Secret Manager, ensuring rapid, scalable deployments
- Tools & Technologies: Python, ECR, Lambda, CloudWatch, Secret Manager, Docker, SQL, ElastiCache

Software Development Engineer II (L5) : [Amazon](#), Vancouver, BC, Canada

June 2022 - August 2023

Project Name: **[ElastiCache \(AWS\)](#)**

- Worked in the monitoring team to develop and implement automated scaling solutions for nodes, ensuring efficient **scaling up or down** based on demand and prediction
- Designed and completed the Performance Test project for large node (Droplet, **64** vCPUs), sending **100K** concurrent requests by **1000** clients, conducting load testing, monitoring CPUs and memory usage, and implementing automated heat mitigation for optimal performance
- Designed and led integration tests to reach **full coverage**, ensuring seamless functionality and performance benchmark
- Maintaining **Droplet** where cache instances are placed and created dynamic virtual hosts to periodically perform health checks, memory status, I/O, and other related metrics of droplets
- Sketched out and implemented app configuration of the project to modify configurations via commands that retains the project from **redeployment**
- Mentored **two** new joiners to the team, providing guidance, conducting training sessions, offering feedback, and fostering a supportive work environment to ensure seamless integration and professional growth within the organization
- Participate in on-call rotation and diligently followed up on action items for timely resolution
- Tools & Technologies: **Java**, C++, Python, **Spring Boot**, **S3**, **DynamoDB**, **Redis**, **AWS**, **SQL**

Project Name: **Droplet Management System - Infra**

- Designed and implemented **Infrastructure-as-Code** (IaC) solutions using AWS CloudFormation, enabling automated provisioning and management of compute, storage, and networking resources across multiple environments
- Authored and maintained YAML-based CloudFormation templates for scalable, repeatable deployments, **reducing manual setup effort** and minimizing configuration drift
- Integrated infrastructure deployments into CI/CD pipelines, ensuring rapid, consistent, and **secure rollouts** of AWS services such as VPCs, EC2, IAM, and security groups
- Collaborated with platform and application teams to define reusable CloudFormation modules, improving team productivity and standardizing infrastructure practices across the org.
- Enhanced infrastructure reliability by implementing automated rollback and change-set validations, ensuring compliance with internal security and operational policies
- Tools & Technologies: AWS **CloudFormation**, **YAML**, **Python**, AWS CLI, Git, **CI/CD Pipelines**

Software Engineer: [AnyConnect](#), Dhaka, Bangladesh

January 2020 - May 2022

Project Name: **Smarter AI Camera**

- Worked on the server-side of **microservices** (Report, Repository, Tenant, Geo-location, Auth) with **Java** for providing data during access of camera and dashboard within least possible time
- Introduced **Report Assistant** service to auto-delete outdated data, optimizing database performance and query speed
- Designed, documented and mastered system test for microservices by **python3** language which helped to increase Test coverage from **90%** to **98%**
- Completed system test of '*AnyConnect Access Library*' and '*AnyConnect Stream Library(Raspberry PI)*' with **C++11**
- Tools & Technologies: gRPC, protobuf, Spring Boot, NoSQL(TableStorage), MySQL, ElasticSearch

Software Engineer: Samsung R&D Institute of Bangladesh

February 2018 - January 2020

Project Name: **[VeoSens \(Health Insurance\)](#)**

- Introduced mobile site cache which improved **80%** query time for users
- Developed **iBG (iOS BackGround) framework** to continue task when ios app is in background
- Passed Samsung Software Capability(SWC) professional test (top **30%** among **120k** employees all around the globe)
- Mentored **10+** team members in data structures and algorithms, resulting code efficiency across team deliverables

Software Engineer: [Enosis Solutions](#), Dhaka, Bangladesh

August 2017 - February 2018

Project Name: **Bangladesh Thalassemia Foundation Hospital management**

- Implemented online doctor appointment feature on the top of existing system, which helped to gain **20%** more customers than normal and provided on-call support
- Tools & Technologies: ASP.NET Core, SQL Server Reporting Services, Microsoft SQL Server

Teaching Assistant: Jahangirnagar University

January 2014 - December 2016

- Coached around **100** students for programming competitions and algorithmic problem solving

Certifications

- [DAMA Certified Data Management Professional \(CDMP\) - Associate](#)
- [AWS Certified Solution Architect Associate \(SAA-C03\)](#)
- [DAMA Certified Data Management Professional \(CDMP\) - Fundamental](#)
- Certification - Kubernetes Application Developer (CKAD) on Udemy
- Certification - Master Microservices with SpringBoot, Docker, Kubernetes on Udemy
- Certification - Redis : The Complete Developers Guide on Udemy

Technical Expertise

- **Languages & Frameworks:** C#, .NET, Python, Java, C++, **Spring Boot**, gRPC, Protobuf, Angular
- **Cloud & Big Data:** AWS (ECR, Lambda, S3, DynamoDB, ElastiCache, CloudWatch), Databricks, Azure DevOps, Delta Lake, Medallion Architecture
- **Data & ML:** PySpark, NLP, RAG, Embeddings, Vector Databases
- **DevOps & Monitoring:** Docker, Kubernetes, Grafana, Prometheus, Loki, OpenTelemetry, CI/CD (Git, Azure DevOps)
- **Databases:** MySQL, NoSQL (TableStorage, DynamoDB), ElasticSearch, SQL Server

Recognitions

- **Best Delivery Award** by Trading Digital (Petronas) for **July 2025** - awarded for leading the **Jarvis Automation** platform, which eliminated **USD 75M** in historical trading discrepancies and delivered real-time monitoring of LNG trading price/limit data, significantly reducing financial and compliance risks
- **ICON of The Month** by Samsung for **May 2019** - for creating iOS background framework adopted across multiple Samsung mobile apps.

Programming Competitions Experience

- **7th / 100+** position in ACM-ICPC Asia Regional Dhaka 2015 hosted by North South University (Team name: [JU SMS](#))
- Placed in top **3** three times, top **10** seven times in multiple national programming competition events between 2014-17
- Qualified for ACM-ICPC Asia Regionals (2014–2016).

Education

- M.Sc in Information Technology, Jahangirnagar University, Dhaka, Bangladesh February 2015 - February 2017
- B.Sc in Information Technology, Jahangirnagar University, Dhaka, Bangladesh January 2011 - January 2015