# Izhar **ul Hassan**

Solutions Architect · IoT Architect · Cloud Architect

*Malmo, Sweden*

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*"We are bound by our choices, but we are more than our mistakes."*

## Summary


- **Hands-on (Coding)** Solution Architect specializing in Data and Cloud Platforms with **15+ years** of experience.
- Strong background in **cloud-native**, **data-driven**, and **IoT edge** architectures, with deep expertise in both **Azure** and **AWS**.
- Experience delivering scalable, secure, and production-grade solutions across industries including **manufacturing**, **shipping**, **telecom** and **adtech**.
- Experience collaborating with **data science teams** to operationalize models and integrate analytics into end-to-end solutions.
- Actively expanding into **AI architecture**, with hands-on experience running local **LLMs**, exploring **RAG** pipelines, and experimenting with **MCP servers**.
- Passionate about bridging **AI** and **cloud engineering** to enable intelligent, scalable, and secure platforms.


## Skills

| | |
|---|---|
| **Cloud** | Azure, AWS, Google Compute, Openstack |
| **DevOps and IaC** | Terraform, Ansible, Kubernetes, Docker, Observability (TICK stack, Grafana, Loki), YAML |
| **Architecture and Design** | Domain Driven Design, Microservices, C4 Architecture |
| **Data Engineering** | Spark, Hadoop, Kafka, Streaming, time series, batch data, Jupyter |
| **Programming** | Python, bash |
| **IoT and Edge** | Linux, Yocto, Edge platform, IoT Hub, OPC UA, Modbus, Edge Gateways |

## Experience

### Grundfos

*Hybrid, Denmark*

Solution Architect

*Jan. 2025 - Present*

- Designing scalable, cyber-secure architecture for **District Heating Optimization System**
- Leading **end-to-end** solution design and architecture
- Engaging with Stakelders to understand business requirements and designing architectural roadmap
- Integration of **pumping hardware** to **Cloud** and **SCADA** via Edge Gateways
- Working with Industrial protocols **Modbus, OPC UA**
- Responsible for implementing **NIS2 and IEC 62443 compliance**, ensuring adherence to industry standards and regulatory requirements
- **Tech stack:** Solution Architecture, Azure, python, IoT, Industrial automation, IEC 62443

### Alfa Laval

*Copenhagen, Denmark*

Azure Platform Architect (IoT)

*Sep. 2018 - Dec 2024*

- Designed and developed the data platform on the mission to enable data driven insights from industrial equipment
- Designed and developed the **edge tech stack**
- Hired and trained core engineering teams for **edge** and **cloud** platforms
- Worked across business divisions to capture digital requirements and deliver tailered connectivity solutions
- Integration into PLC solutions over Industrial protocols **OPC UA, Modbus, BLE**
- Worked on cybersecurity hardening of edge device stack
- Delivered platform automation **using Terraform, Ansible**
- Delivered metrics and monitoring stack (Telegraf, InfluxDB, Chronograf)
- **Tech stack:** Azure, Linux, python, Docker, IoT, Industrial automation, Solution Architecture

### Novo Nordisk

*Copenhagen, Denmark*

AWS Tech Lead

*Mar. 2022 - Sept. 2022*

- Architected predictive maintenance platform leveraging AWS Lambda, S3, Timestream, SQS
- Developed scalable microservices and data pipelines
- Applied Infrastructure as Code (CDK) and CI/CD with Azure DevOps
- Enabled visualization with Grafana for operational insights
- **Tech stack:** AWS Lambda, Grafana, AWS Timestream, AWS CDK, Python, Amazon S3

### AP Moller Maersk

*Copenhagen, Denmark*

Lead Agile Developer

*Aug. 2017 - Aug. 2018*

- Led data engineering team migrating on-prem Datalake to Azure Cloud
- Designed microservices-based Datalake architecture for analytics and ML
- Built ingestion, storage, and archival strategies for high-volume data
- **Tech stack:** Azure, python, Docker, Kubernetes, Kafka, spark, Hadoop

### Telia Sonera

*Stockholm, Sweden*

Solution Architect

*Mar. 2016 - Jul. 2017*

- Built multi-tenant Kerberized Data Lake for telecom network data
- Built Data Pipelines for Crowd Analytics, Network Data (probes, CDRs), IPTV
- Optimized Spark jobs (10x speedup for anonymization)
- Migrated workloads from MapReduce/Hive to Spark
- **Skills:** Hadoop, Apache Spark, Python, Solution Architecture, Cloudera

### PDC Center for HPC, KTH

*Stockholm, Sweden*

Research Engineer

*Jun. 2009 - Feb. 2015*

- Supported and optimized parallel programming applications using **MPI**, **OpenMP**, and **CUDA** on PDC clusters
- Administered and operated the **Cray XE6** supercomputer (35,000+ cores)
- Managed installation, configuration, and maintenance of HPC software environments
- Designed and developed a monitoring and accounting dashboard for cluster jobs (**Django, MySQL, jQuery, HighCharts**)
- Collaborated with researchers to design, parallelize, and **optimize high-performance applications**
- Authored and maintained end-user documentation for HPC resources
- Delivered technical support and training workshops for new users and staff

## Education

### KTH, Royal Institute of Technology

*Stockholm, Sweden*

Masters in Scientific Computing (Coursework)

*2008*

- Specialization in High Performance Computing

### National University of Science and Technology

*Islamabad, Pakistan*

Bachelors in Information Technology

*2002 - 2006*

- Focus on Algorithms and Data Structures