Izhar **ul Hassan**

LEAD · SCALE · DELIVER

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 (Telegraf, Influxdb, Grafana, Loki), YAML
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
Architecture and Design	Domain Driven Design, Microservices, C4 Architecture

Experience

Grundfos
Hybrid, Denmark

SOLUTION ARCHITECT - FREELANCE
Jan. 2025 – Present

Leading architecture and design for an Azure-based district heating optimization platform, ensuring scalability, security, and compliance.

- Design a **cyber-secure, scalable solution** for the **District Heating Optimization System**
- Define and delivere **end-to-end solution architecture**, aligning with business and technical requirements
- Integrate **industrial pumping hardware** with **Azure Cloud** and **SCADA systems** via edge gateways, enabling real time data flow
- Implement compliance with **NIS2 and IEC 62443**, reducing regulatory risk and strengthening security posture
- Collaborat with stakeholders to establish an **architectural roadmap** for IoT and data driven platform
  Tech stack: Azure, Python, IoT, Edge Computing, Cybersecurity, Integration, Solution Design

Alfa Laval
Copenhagen, Denmark

AZURE PLATFORM ARCHITECT (IoT)
Sep. 2018 – Dec. 2024

Founded and scaled IoT platform engineering teams; delivered cloud-native solutions enabling industrial data insights.

- Designed and deployed an **Azure-based IoT data platform**, enabling predictive analytics and operational insights for industrial equipment
- Modernized legacy connectivity into a **cloud-native architecture**, reducing feature delivery time by 40%
- Built and led engineering teams for **edge and cloud platforms**, driving adoption of modern DevOps practices
- Automated deployments using **Terraform and Ansible**, cutting provisioning time by 60%
- Implemented **cybersecurity hardening** for edge devices, mitigating vulnerabilities and ensuring compliance
- Delivered a monitoring stack **(Telegraf, InfluxDB, Chronograf)** for real-time performance metrics
  Tech stack: Azure, Linux, Python, IoT, Docker, Ansible, Terraform, Streaming Data

AP Moller-Maersk

Copenhagen, Denmark

LEAD AGILE DEVELOPER

Aug. 2017 – Aug. 2018

- Led migration of an on-premises data lake to **Azure Cloud**, improving scalability and reducing infrastructure costs
- Designed a **microservices-based architecture** for analytics and machine learning workloads
- Developed ingestion and archival strategies for **high-volume data**, ensuring compliance and performance
  Tech stack: Azure, Python, Docker, Kubernetes, Kafka, Spark, Hadoop

Telia Sonera

Stockholm, Sweden

SOLUTION ARCHITECT

Mar. 2016 – Jul. 2017

- Built a **multi-tenant, Kerberized data lake** for telecom network data, improving security and scalability
- Developed data pipelines for **crowd analytics and network data** (probes, CDRs, IPTV)
- Optimized Spark jobs, achieving a **10× performance improvement** for anonymization processes
- Migrated workloads from **MapReduce/Hive to Spark**, reducing processing time significantly
  Skills: Hadoop, Apache Spark, Python, Solution Architecture, Cloudera

PDC Center for HPC, KTH

Stockholm, Sweden

RESEARCH ENGINEER

Jun. 2009 – Feb. 2015

- Optimized parallel programming applications using **MPI**, **OpenMP**, and **CUDA** on HPC clusters
- Administered and operated the **Cray XE6** supercomputer (35,000+ cores), ensuring high availability
- Developed a monitoring and accounting dashboard (**Django, MySQL, jQuery, HighCharts**) for cluster jobs
- Collaborated with researchers to design and **parallelize high-performance applications**, improving efficiency
- Delivered technical support and training workshops for HPC users, enhancing adoption and productivity

Freelance Projects

Novo Nordisk

Copenhagen, Denmark

AWS TECH LEAD - FREELANCE

Mar. 2022 - Sept. 2022

- Led the development of a predictive maintenance platform on **AWS**
- Developed scalable microservices and data pipelines using **Python, Lambda, S3, and Timestream**
- Applied Infrastructure as Code (CDK) and CI/CD using Azure DevOps
- Enabled visualization with **Grafana** for operational insights
  Tech stack: AWS, python, Lambda, Grafana, AWS Timestream, AWS CDK, Amazon S3

IKEA

Malmo, Sweden

SOLUTIONS ARCHITECT (IoT) - FREELANCE

Dec. 2019 - may. 2020

- Evaluated and assesed the integration of camera driven crowd flow and inventory tracking in IKEA stores.
- Evaluated security implications of using cameras within a commercial space.
- Helped data scientists to analyze and visualize data (GCP, Jupyter, Airflow)
  Tech stack: GCP, python, Grafana, Airflow, IoT, cybersecurity

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