

# HAMMAD ALI KHAN

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## EDUCATION

**BS (COMPUTER SCIENCE), 2011-2015**  
FAST-NUCES, KARACHI

**INTERMEDIATE (PRE-ENGINEERING), 2009-2011**  
COMMECS INSTITUTE OF BUSINESS AND  
EMERGING SCIENCES

**MATRICULATION (SCIENCE), 2007-2009**  
HAMDARD PUBLIC SCHOOL

## SKILLS

**Programming Languages:** Python, JavaScript, JAVA, C/C++, C#, R, Scala, GO, RUST

**Framework/Stack Web:** Ruby on Rails, Flask, Django, Express, OpenCV

**Big Data:** Hadoop, Spark, Kafka, Flume, ZooKeeper, Elastic Search (ELK)

**Databases:** SQL/PLSQL, ER/Schema Designing, MongoDB, Postgres, InfluxDB, Cassandra

**Cloud:** AWS (EC2, Lambda, Step Functions, ElasticCache(Redis), Cloudwatch(Metrics, Log ingestion, alarms), SNS, SQS, Kafka, IAM, Route53, S3 storage, RDS database, Dynamodb database, API Gateway, VPC, EBS Elastic Beanstalk web deployment, EMR Elastic Map Reduce for big data processing, IoT Core, Greengrass), Predix (Timeseries service), Google

**Courses:** Design and Analysis of algorithm, Computer network, Artificial intelligence, High performance computing, Network security, Design patterns

## EXPERIENCE

**November 2020 - Present**

IoT Startup (Owner)

### Responsibilities

Building a product for central monitoring system for customer sites (Energy, Textile, Manufacturing, Fleet, etc). This product will provide client business insights, real-time escalations, forecasting, predictive maintenance, and much more from their high-velocity sensor data, at their fingertips. As an owner, I work on business development, client dealing, feature engineering, design, and team coordination for implementation.

## **November 2020 - Present**

EIX (Enterprise Integration Experts)

### **Job Responsibilities**

1. Working on solutions for new features
2. Training team members on AWS services, performing code reviews
3. Working on report intelligence system consisting of Amazon Redshift, DynamoDB and ElasticSearch
4. Debugging application infrastructure, increasing the code coverage
5. Building APIs for external integrators

Working on an exciting stack of multiple Amazon Services like Aurora, Redshift, Quick Sight, ECS, etc to build a multi-tenant distributed system. Languages used are Nodejs, test framework like JEST, Mocha, blazemeter

## **October 2019 - October 2020**

REON Energies (Dawood Hercules Group), Software Technical Lead

### **Job Responsibilities**

1. Architect solution with a close team of AWS
2. Build a real-time monitoring system for IoT based data
3. Build a data pipeline for high-velocity data, driving insights, real-time alarm escalations
4. Deploy machine learning pipeline to detect fuel theft, battery decay, optimal cleaning time
5. Build ticketing and audit features for sites field engineers, which provide them report how the site is performing under assigned persons
6. Build a reporting system to provide a summary for each day and forecast

Languages used for backend side is pure python, variation like numba, cython and deployed on AWS stack services include S3, cloudfront, elasticache, elasticsearch, SQS, SNS, SES, API Gateway, AppSync, Sagemaker, EMR

## **October 2018 - October 2019**

Zaavya, Sr. Software Engineer

### **Job Responsibilities**

Working on a project of MDM (Master Data Management) for USA based client. My responsibilities include

1. Provide team with knowledge of AWS infrastructure and its services
2. Designing solutions with client

3. Build up data ingestion pipeline using a graph database, reporting framework, integration with client
4. Build a fault-tolerant based on retry mechanism, which has the capability to replay messages on failures and provided deep logs for visibility

Languages used are Python and Nodejs with AWS services like S3, Step-Function, ElastiCache, API Gateway, SQS, SES, Neptune, EC2

## **March 2017 - October 2018**

Inbox Technologies, Trainee Technical Consultant

### **Job Responsibilities**

- Work in department of DIH (Digital Intelligence Hub) creating smart product using AI, Machine and Deep Learning.
- Applying latest technologies in field of data engineering retrieving, transforming, cleaning and providing deep insights of complex data using stack provided by Cloudera.
- Worked on facial recognition an in-house build for getting stream from NVR (Network Video Recorder) and training a model for recognition and detection, for attendance management and count.
- Extensive work on AWS cloud services, familiarity with cloud infrastructure, provide me an edge to build, prototype and deploy different architecture with diverse technological stack.
- As a team lead I am having people across cities managing, reporting, distribution of work load and keeping team trained with latest technological trends is one of my core skills.

### **Projects**

- Worked with Engro Polymer manufacturing for HCL column recommendations. Getting more than two hundred variables, pushing it to predix cloud, applying cleaning for data sparsity and transformation and finally utilizing it to train a model.
- Working with REON Solar Energy providers for providing them real data analytics. Getting data for inverter, grid, generator and weather, pushing it to predix cloud time-series. Finally, will be applying machine learning for cost optimization on solar panel maintenance based on temperature, dust and solar output.

## **February 2016 - February 2017**

10Pearls Pvt. Ltd., Game Developer

### **Job Responsibilities**

- Develop and design games both 3d and 2d on unity3d cross platform iOS and Android.
- Responsible for writing backend logic for games mostly 2d.

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## **RESEARCH INTEREST**

- Eager to work on latest technologies based on machine and deep learning with endless implications on churn detection, predictive analysis and computer vision.
- Opportunities to work on GPUs clusters for high performance computing, developing robust algorithms.
- Work in field of artificial intelligence focusing industries like manufacturing, health, internet of things, energy sectors to help develop smart system that optimize cost and maintenance.
- Work in field of computer vision to detect, recognize and track to help improve security for smart cities.