Irfan Danish

Machine Learning & MLOps Engineer at Urbanise

A Machine Learning Engineer with more than four years of hands-on experience of developing and deploying ML solutions. Being an AI enthusiast, I have the required self-motivation, creativity and passion for my work. Actively involved in Linux, Python, DevOps and Cloud open source community. And currently, I am eagerly looking forward to further expand my experience in DevOps and Machine Learning.

📊 Strengths & Skills

- ✔ Ansible
- ✔ Deep Learning
- ✔ Git
- ✔ Kubernetes
- ✔ Linux
- ✔ Mongo DB
- ✔ Pandas
- ✔ Terraform
- ✔ Shell Scripting
- ✔ AWS
- ✔ CI/CD
- ✔ Jenkins
- ✔ Flask
- ✔ Kafka
- ✔ SQL
- ✔ TensorFlow
- ✔ NLP
- ✔ R
- ✔ C++
- ✔ Computer Vision
- ✔ Docker
- ✔ Keras
- ✔ Python
- ✔ Machine Learning
- ✔ PyTorch
- ✔ MLOps
- ✔ SPARK

☑ Experience 4 years

Urbanise 3.5 years Mar 2019 - Present
Senior Machine Learning & MLOps Engineer

Upwork 2.9 years Sep 2018 - Aug 2021
Machine Learning Engineer

☰ Projects

Workorder Duplication Detection (Urbanise)
Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Automatic Text Completion for Complain Description (Urbanise)
Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Automatic Complain Description Generation From an Image (Urbanise)
Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Interactive Virtual Assistant (Urbanise)
Python, TensoFlow, Rasa, Amazon Polly and Amazon TTS

Smart Assign System (Urbanise)
Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Near Real Time Anomaly Detection System From Streaming Data (Urbanise)
Python, Kafka, SparkML, Amazon MSK & Amazon EMR.

Real Time Data Ingestion Pipeline (Urbanise)
Python, PySpark, Kafka, Amazon MSK, EMR

Computer Vision Based AI Security System for Survillance Videos (Upwork / Psychic Systems)
Python, C++, TensorFlow, PyTorch, Terraform, Nvidia Deep Stream SDK, Nvidia Jetson Nano, AWS API Gateway, Kinesis Data Streams, Dynamo DB

Sports AI and Analytics Models (Upwork / GameVision.AI)
Python, TensorFlow, PyTorch, MongoDB

Contact Info

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🏠 National Boys Hostel, Tramari Chowk
   Chack Shehzad, Islamabad
   Islamabad, Pakistan

🎓 Academics

MS DS | 2023 | 3.5 CGPA
National University of Computer and Emerging Sciences, Islamabad

BS Electronics | 2019 | 3.1 CGPA
COMSATS University Islamabad,

✺ Certifications

DevOps Jenkins Master
Udemy

Machine Learning Engineering for Production (MLOps) Specialization
Coursera

Practical Data Science on the AWS Cloud Specialization
Coursera

Microsoft Azure AI Fundamentals AI-900 Exam Prep Specialization
Coursera

DP-100 Microsoft Azure Data Scientist Associate
Coursera

Ultimate AWS Certified Developer Associate
Udemy

Decoding DevOps with Projects
Udemy

Terraform on Azure with IaC DevOps SRE
Udemy

Computer Vision Models for Assisting in Daily Activities (Upwork / Cerebriam Studio Limited)
Python, TensoFlow, PyTorch

Warehouse Stock Prediction (Upwork)
Python, TensorFlow, Pandas, PostgreSQL

Image Super Resolution (Upwork / GEOMATIC Systems)
Python, TensoFlow, NumPy

Real-Time Network Graph Analysis (Upwork)
Python, Kafka, Apache Spark, PostgreSQL

📋 Work History

Urbanise	Mar 2019 - Present (3.5 years)

Senior Machine Learning & MLOps Engineer
Melbourne, Australia

My responsibilities include leading the Machine Learning Team and developing ML and Big Data Solutions and managing their end-to-end CI/CD and deployment pipelines.

Upwork	Sep 2018 - Aug 2021 (2.9 years)

Machine Learning Engineer
Islamabad, Pakistan

During my work as Freelance Developer on Upwork I have provided Machine Learning Services to Various National and International clients.

▤ Projects

Workorder Duplication Detection

Company: Urbanise

Tools: Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Helped reduce the Worker Force cost by solving the problem of Workorder Duplication. Developed AI Based Job Duplication Detection System to detect and mark possible duplicate Workorders using TensorFlow & TensorFlow Serving to develop the Machine Learning Model, and Amazon ECS, S3, Lambda, SageMaker, API Gateway & Terraform to configure Deployment Pipeline.

Automatic Text Completion for Complain Description

Company: Urbanise

Tools: Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Improved customer experience by providing automatic text completion and suggestions for complain descriptions. Built complete end to-end preprocessing, training and inference pipeline using TensorFlow, Amazon SagMaker, API Gateway, ECS & used Terraform to provision the AWS resources.

Automatic Complain Description Generation From an Image

Company: Urbanise

Tools: Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Developed Custom Image Captioning System which provided the feature for clients to generate the complaint description form the pictures of the issue

Interactive Virtual Assistant

Company: Urbanise

Tools: Python, TensoFlow, Rasa, Amazon Polly and Amazon TTS

Developed an Interactive Chabot for Customer Assistance using RASA, and Amazon Polly. It provided the facility for users to have interactive conversation with Virtual Assistant to resolve issues, raise workorders, register complaints and find the status of there tickets.

Smart Assign System

Company: Urbanise

Tools: Python, TensoFlow, PostgreSQL, Pandas, Terraform, Amazon SageMaker, ECS, S3, Lambda, API Gateway

Designed Machine Learning Based Template and Supplier Assignment System for Facilities Management Jobs, to replace the human in the loop Template and Supplier Assignment system.

Near Real Time Anomaly Detection System From Streaming Data

Company: Urbanise

Tools: Python, Kafka, SparkML, Amazon MSK & Amazon EMR.

Provided the solution for detecting anomalous events from the real time data of sensors by developing real-time anomaly detection system using Kafka and SparkML, Amazon MSK & Amazon EMR.

Real Time Data Ingestion Pipeline

Company: Urbanise

Tools: Python, PySpark, Kafka, Amazon MSK, EMR

Designed and implemented a real-time data pipeline to process semi-structured data by integrating 150 million raw records from 30+ data sources using Kafka and Spark Structured Streaming.

Computer Vision Based AI Security System for Survillance Videos

Company: Upwork / Psychic Systems

Tools: Python, C++, TensorFlow, PyTorch, Terraform, Nvidia Deep Stream SDK, Nvidia Jetson Nano, AWS API Gateway, Kinesis Data Streams, Dynamo DB

Provided AI based Security System Solution for Pakistan Based Startup, Psychic Sytems. The system had the ability to detect known and unknown persons, track their movements and time spent on the premise. The system also had the ability to detect any anomalous events such as assault, vandalism, burglary, kidnapping, theft in real time form surveillance videos.

Facial Detection and Recognition System was developed to detect and recognize authenticated persons and provide log to the applications. Object Detection and Tracking System to detect persons, weapons, vehicles and track their movement along with Threat and Anomalous Event Detection Model.

To deploy the system Nvidia Jetson Nano and Nvidia Deep Stream SDK was configured with each survillance cam.

Sports AI and Analytics Models

Company: Upwork / GameVision.AI

Tools: Python, TensorFlow, PyTorch, MongoDB

Delivered Computer Vision based Sports AI Models for USA based PickleBall startup GameVision.Ai. Developed Pose Estimation, Object Detection and object tracking model for ball and player during a PickleBall game. Also deilivered a model that can keep track of ball height from the ground, and player position in the court.

Computer Vision Models for Assisting in Daily Activities

Company: Upwork / Cerebriam Studio Limited

Tools: Python, TensoFlow, PyTorch

Delivered several Computer Vision Models for a UK based AI Startup, Cerebriam Studio Limited.
Developed Spatio-Temporal Obfuscation Framework, for Visual Privacy Protection in Real-Time Video, which blurs the specific part of the frame. Developed Fall Detection System using 3-Stream Networks to rescue elderly people in case of fall.

Warehouse Stock Prediction

Company: Upwork

Tools: Python, TensorFlow, Pandas, PostgreSQL

Designed Warehouse Stock Needs Prediction System for a US based client, the systems predict stocks needed at different stores on the basis of mobility, sales traffic and COVID effected persons in the area.

Image Super Resolution

Company: Upwork / GEOMATIC Systems

Tools: Python, TensoFlow, NumPy

Delivered Satellite Image super resolution system to GEOMATIC Systems, a Polish research company.

Real-Time Network Graph Analysis

Company: Upwork

Tools: Python, Kafka, Apache Spark, PostgreSQL

Developed a System for Real-Time Network Graph Analysis using Kafka and Apache Spark.