

Pir Sami Ullah Shah

I am eager to join a reputable organization, leveraging my expertise to develop and deploy robust machine learning models. My focus is on implementing automated MLOps pipelines for seamless transitions into production-ready solutions.

Islamabad, Pakistan

PROJECTS

Towards MLOps: DevOps Tools Recommender System through Machine Learning Systems — (Masters' Thesis)

Dataset Versioning through DVC (Dataset Version Control)

Managed the versioning of a dynamic dataset stored on Google Drive using Data Version Control (DVC). Demonstrated proficiency in maintaining and tracking various versions of the dataset.

ETL (Extract, Transform, Load) Pipeline through Airflow

Class Activity: a pipeline is constructed that does scraping of the articles from a news website which includes a link to the article, title of the article and full description of the article and stored in csv format.

- The pipeline comprises of different steps i.e., extraction of all the links from the front page of the the selected website (Extraction).
- Opening of each link, title scraping and description scraping (Transformation).
- Storing the extracted link, its title and the description in csv format (Loading).

Model Versioning and Tracking through MLFlow

Class Activity: This specific activity includes

- Training of machine learning model.
- Storing the trained model in MLflow model registry.
- Execution of multiple experiments of the model, comparison of different versions of model experiments.

CI/CD Pipeline

Class Activity: This specific activity includes

- Creation of github repository and maintaining different branches i.e., dev, test and master.
- Project scaffolding: maintaining makefile and requirements.txt file
- Github Actions workflows to check code quality in each commit and executes test.py file once push event get occurred in any repository.
- Similarly to check the quality of code in each commit and

SKILLS

Machine Learning Operations (MLOps)

DevOps (CI/CD)

Machine Learning

Natural Language Processing

Python Development

PHP Development (Yii2 Framework)

C-Sharp Development (Winform, WPF)

C++ Development

COURSES

[Python Essentials for MLOps](#)

[MLOps Concepts](#)

[Fully Automated MLOps](#)

[MLOps Deployment and Life Cycle](#)

[Python Development](#)

TOOLS

Github

Bitbucket

Git

Github Actions

Data Version Control (DVC)

Airflow

execution of test.py file is done through jenkins based jobs as well where the repository was connected through github webhooks.

Containerization and Orchestration of an ML Application

Class Activity: This specific activity includes

- Creation of dockerfile which includes multiple steps i.e., version of python, installation of all the required packages, copying the complete project
- Building of dockerfile, pushing the image to dockerhub.
- In minikube the lighter version of kubernetes, the pulling of image from dockerhubs' public repository and deploy it into kubernetes cluster.
- Lastly, the deployment was done by replicating three different the same app in three different pods if any pod gets destroyed it maintained its state automatically.

Automatic Classification of Raw Software Requirements using Machine Learning — Semester Project in Advance Machine Learning Course

[Click to see the complete paper](#) (Semester Project - un-published)

KinoCric: Cricket Bowling Action Analysis through Digital Markers using Microsoft Kinect- (Final Year Project)

The tech stack used to develop this project

- C - Sharp Development.
- Microsoft Kinect Device.
- Windows Presentation Foundation (WPF).
- Microsoft Kinect Development Kit (SDK).

EXPERIENCE

National University of Computer and Emerging Sciences (FAST), Islamabad — Lecturer

MONTH 2022 - PRESENT

Below is the list of the courses that I primarily teach

- Machine Learning Operations (MLOps).
- Object Oriented Programming (OOP).
- Database Management Systems (DBMS).

GradelyNG, Nigeria — Remote Backend Engineer

June 2020 - DEC 2020

Worked as a full time remote backend engineer where the core responsibilities were

Jenkins

MLFlow

Docker

Kubernetes

Postman

EC2 AWS Instance

LANGUAGES

Pashto, Urdu, English

ARTICLES

[Containerization in MLOps](#)

[Preparing Machine Learning Model for Production](#)

INVITED TALKS

[Invited talk on MLOps and its importance to final years students of FAST-NUCES.](#)

[Invited talk on MLOps and its importance to the research engineers at Data Insight Lab.](#)

AWARDS

Best Complement Award Issued by President City University Peshawar.

Best Performance Award Issued by Vice Chancellor City University Peshawar.

Software Project Exhibition
Runner-up: Issued by JSPark Society Capital University Islamabad.

Position Holder
Issued by 3rd Invention to Innovation Summit 2017

- Plan the user requirements.
- Designing the requirements through modeling language (UML).
- Construction of Restful APIs in Yii2 PHP based framework.
- Testing of the APIs through postman.
- Deploying of the APIs to productions.
- Providing details to the front end team of the deployed APIs.

SMSAMI, Peshawar — Backend Engineer

June 2019 - AUG 2020

Worked as full time on site backend engineer where the core responsibilities were

- Requirements gathering from competitors' platform.
- Maintaining backlog by adding, updating or deleting user stories (Jira Software).
- Weekly sprint meeting to assign new tasks.
- Daily scrum meetings to provide the status of the assigned work.
- Designing the requirements through modeling language (UML).
- Construction of Restful APIs in Yii2 PHP based framework.
- Testing of the APIs through postman.
- Deploying of the APIs to productions.
- Providing details to the front end team of the deployed APIs.

EDUCATION

National University of Computer and Emerging Sciences (FAST), Islamabad — *Masters of Science in Software Engineering*

SEP 2020 - JAN 2023

Toward MLOps: DevOps Tools Recommender System for Machine Learning Systems (Thesis)

City University of Sciences and Information Technology (CUSIT), Peshawar – *Bachelors in Software Engineering*

SEPT 2014 - DEC 2018

KinoCric: Cricket Bowling Action Analysis through Digital Markers using Microsoft Kinect (Final Year Project)

[Click to watch screen recording](#)

[Click to watch complete setup](#)