Hassan Rehman

AI Engineer - Python Developer

Sept 11,1995

Lahore, Pakistan

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Summary

AI Engineer with 4 years of working experience in computer vision, predictive modelling, data wrangling, architecture designing and python backend programming. My goal is to deliver quality work to my clients and driving innovation. I always believe in working smartly and ethically.

Work Experience

Nextbridge Pvt Ltd. *Lahore, Pakistan*

Senior AI Engineer *Jan. 2019 - Present*

- Team management.
- Research on current on going technologies.
- Architectural level designing of projects for better software development.
- Handling of ML-Ops and Dev-Ops. Designing of better cloud architecture that suits the best with the requirement.
- Gather the requirement from client and provide the tentative time estimate.
- Develop, fine tune, train and validate the machine learning models based on the data and analysis.
- Rapid prototyping of client ideas to give them better picture of what we can do for them.
- Making of timelines and feasibility reports of project.
- Handles the back-end API's to integrate the machine learning model.
- Involved in recruiting and training of new resources. Provides the road map for them to be trained over their training period.

Nextbridge Pvt Ltd. *Lahore, Pakistan*

Data Science Intern *Oct. 2018 - Jan. 2019*

- Got training of machine learning and deep learning models.
- Got training of data wrangling and pre-processing techniques.
- Got training of software development technique.
- Involved in development of in-house projects.
- Delivered successfully the prototypes based on machine learning.

Education

National University of Computer And Emerging Sciences (NUCES). *Lahore, Pakistan*

MS Data Science *2021 - Ongoing*

- All course work covered.(3.0 CGPA)
- Currently working on thesis which is based on segmenting dental diseases from X-ray images.

The Islamia University *Bahawalpur, Pakistan*

B.S. in Computer Science *2014 - 2018*

- Got 3.68 CGPA.
- Studied all programming related courses.
- Done my FYP based on computer vision.

Skills

Machine Learning	Keras, Tensorflow, Pytorch,OpenCV, Spacy, Dialogflow, RASA, Pandas, PySpark, Huggingface, NLTK and Scikit
Back-end	Python, C++, Android, Flask, Django, REST API, Docker, Sqlite and MongoDB
Scrapping Tools	BeautifulSoup, Selenium and Scrappy
Front-end	HTML, CSS, Bootstrap and Javascript
Cloud Services	AWS EC2, AWS Lambda, AWS SageMaker,AWS ECR, AWS S3 and GCP Data Proc
Deployment	GCP, AWS, Heroku, Nginx and Apache
Soft Skills	Negotiation, presentation, logical thinking, story telling, research, mentoring, selling skills, willingness to accept feedback and understanding body language.

Projects

dAIsy

Project that deals in CT scan using AI. [www.carlsmed.com]

- Design cloud architecture and developed backend + DL Pipelines.
- Segmentation of the lumbar and sacrum region from the CT scans using U-Net architecture.
- 96 percent of dice score has been achieved till now.
- Made deep learning pipelines.Deployed pipeline on AWS Sage Maker via AWS ECR.Used AWS Lambda for triggering

Aggdrone

It converts 2D images of drone to 3D terrain. [www.portal.aggdrone.com]

- Designed software architecture.Developed backend + Computer Vision Pipelines.
- It converts 2D drone images to 3D models.The goal is achieved by computer vision and photogrammetry technique.
- Purpose of project is to calculate the volume of piles on mining site.
- Developed in python using Django and deployed on GCP
- Developed a tool in JS using potree and Three JS for calculation of volume.

Hurry Park

Shared library to detect Pakistan's license plate.

- Used extensive data of license plates and achieved the accuracy of 97 percent.
- Can detect and recognize all sort of number plates of Pakistan as well as fancy.
- Developed in C++ and converted to .so file using Android NDK
- Purpose is to replicate something like OpenALPR

Mining site surveillance

IOT based project. [www.myjobsitesentry.com]

- The system is developed for monitoring of mining sites using Flask.
- The system itself developed on Nvidia Xavier which is connected to real time IP cameras.
- Model trained on Yolo v4 for human, vehicle and motion recognition.
- Can differentiate between mining site worker and normal person.

Coin Crypto

Forecasting of crypto coins. [Freelance project]

- It provides useful insights of crypto currency.
- It provide prediction of currency based on its past data.
- It provides information of bearish and bullish market
- The real time data is fetched from Coin Gecko
- Developed on Flask

Ikra App

Fuzzy phonetic search for Arabic manuscript. [www.ikra.com.pk]

- Used phonetic search algorithm and distance technique for information retrieval.
- Retrieve record by voice or roman Arabic.
- App is available on web, android and IOS. Web backend is designed in Flask.
- 10K+ downloads with 4.5 rating on Google Play Store.

Publications

2D UNET SEGMENTATION OF MITOCHONDRIA FROM ELECTRON MICROSCOPY IMAGES

Hafiz Hassan Rehman and Mohsin Rehman, "2D UNET Segmentation of Mitochondria of Electron Microscopy Images," in International Research Journal of Modernization in Engineering Technology and Science, vol. 4, pp. 1000-1007, Sept 2022, doi: 10.56726/IRJMETS29962.

- DOI: www.doi.org/10.56726/IRJMETS29962
- Code: www.github.com/HassanRehman11/mitochondria_segmentation

Certifications

Modernizing Data Lakes and Data Warehouses with GCP

Coursera

- www.coursera.org/verify/2CVWQDCG9MDB

Google Cloud Platform Big Data and Machine Learning Fundamentals

Coursera

- www.coursera.org/verify/MGFRRPAJSZXV

Corporate Communication Skills

Nextbridge Institue

- www.nextbridgeinstitute.com/certificate?cid=602e4d86f0265