USMAN MUHAMMAD
DL / ML ENGINEER | DATA SCEINTIST

My passion is to understand and bring life to machines through data, with the help of deep learning and traditional learning.

CONTACT

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Address: Islamabad, Pakistan

Portfolio: https://whywho.me

PROFESSIONAL SKILL

Python | JS | Tensorflow | PyTorch | Keras | Sklearn | MONAI | MMLAB | REACT | DJANGO | FLASK | LINUX | SQL | HTML5 | CSS | AWS

TECHNICAL SKILL

Deep Learning:
CNN, RNN, GAN, RCNNs, XAI, LLMs, VAEs, CLIP, SNN, Transformers, Autoencoders, diffusion models, LLMs, Fine-tuning, Instruct/Prompt tuning, Transfer learning RLHF, policy optimization, Zero/One-shot learning, Vision Transformers.

Traditional Learning:
Linear, Polynomial, Ridge & Lasso Regresion, SVM, Decision tree, Randon-Forest, PCA, Clustering, K-mean, XGBoost.

Problems type:
Computer Vision, NLP, Classification, Segmentation, Detection, Forecasting, Data Analysis.

Web Development:
REACT, Django, Streamlit, FAST API, REST API, HTML5, JS, P5.JS, ML5, Tailwindcss, Bootstrap.

Database Management Software:
SQL: PostgreSQL

PERSONAL SKILL

● SELF-MOTIVATED ● ORGANIZED
● TEAM WORK ● INNOVATE

CERTIFICATES

Deep Learning Specialization -- DeepLearning.AI

TensorFlow: Advanced -- DeepLearning.AI

Generative AI with LLMs -- Coursera

Sequence Models -- Coursera

Advanced Computer Vision --DeepLearning.AI

Custom Distributed Training --DeepLearning.AI

SOCIAL LINKS

🌐 https://whywho.me

 https://github.com/ozzmanmuhammad/

in in/usman-muhammad-7888b0205/

WORK EXPERIENCES

NATIONAL CENTER OF ARTIFICIAL INTELLIGENCE / Jan 2023 - Present

SENIOR ML ENGINER / RESEARCH ASSOCIATE: I led groundbreaking projects in AI and medical imaging. I implemented GradCAM for model interpretability, developed 3D brain MRI segmentation, and utilized OpenAI's CLIP for X-ray report generation. Additionally, I excelled in histopathology TIFF image analysis, employed MONAI, MMLab, and transformer-based models for segmentation and detection tasks, and also participated in different natural image competitions. My work pushed the boundaries of AI in medical research and improved patient care.

NATIONAL CENTER OF ARTIFICIAL INTELLIGENCE / Mar 2022 - Jan 2023

RESEARCH ASSISTANT: Developed an AI-powered DICOM viewer using deep learning for breast cancer and tuberculosis detection. Utilized large multi-model medical datasets to create accurate classification, detection, and segmentation models, optimizing performance and safety. Collaborated with a multidisciplinary team and achieved an innovative and impactful solution for medical diagnosis. And successfully integrated into REACT based DICOM viewer.

GS TECHNOLOGIES (PVT) LTD / Oct 2021- Dec 2021

DATA ANALYST INTERN / ISB: Created an automated system for hiring data, their data management, and storage. Also did coordinated digital marketing with the team, designed and planned campaigns.

DITS / Sep 2021 - Sep 2021

WEB DEVELOPER INTERN ISLAMABAD: Worked on website for the school management system. Front-end was developed with Angular and Back-end was Asp.net core 5 entity framework and SQL.

PERSONAL PROJECTS

Completed more than 30+ projects in different problem types from Computer Vision to NLPs LLM model. Few are below but for more details please check my github.

PAEDIATRIC MRI SEGMENTATION / Swin-UNETR

Participated in Brat23 MICCAI challenge and did different experiment using 2D UNet and MONAIs transformer-based encoder and CNN decoder: Swin-UNETR

INSTRUCT FINE-TUNED LLM WITH RLHF / Flan T5

I instruction/prompt based fine-tuned Googles Flan T5 model with reinforcement learning to generate more positive and human oriented (3Hs) text summaries.

EDUCATION

BIOINFORMATICS BACHELORS DEGREE / March 2021

COMSATS UNIVERSITY, ISLAMABAD: CGPA: 3.55

REFERENCES

Dr. Tehseen Zia
Associate Professor(Tenured): COMSATS University ISB
AI Consultant: Swipbox

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