

Danish Javed

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ABOUT ME

A final-year BS Artificial Intelligence student with a deep interest in research across multiple areas of artificial intelligence, particularly in exploring computer vision and natural language processing for medical applications, Currently looking for masters opportunity to further expand my expertise in this field.

WORK EXPERIENCE

01/06/2024 – 30/08/2024 Potsdam, Germany

RESEARCH INTERN UNIVERSITY OF EUROPE FOR APPLIED SCIENCES

- Gathered relevant data from multiple X-ray-related datasets and created a new dataset comprising 4,083 entries, including both textual and visual data. Customized and fine-tuned Visual BERT for VQA VLM to extract information about diseases from patient data and X-ray images, achieving 60% accuracy.
- Abstract of this research study is accepted by the 5th International Electronic Conference on Applied Sciences.

25/05/2023 – 26/08/2023 Rawalpindi, Pakistan

MACHINE LEARNING ENGINEER EZILINE SOFTWARE HOUSE

- Achieved 92% accuracy in detecting whether a driver is wearing a helmet by training deep learning models and deployed for real-time use. Trained a Convolutional Neural Network (CNN) model to assess bone fractures from X-Ray images. Deployed the model using Gradio after achieving an 83% accuracy.
- Fine-tuned the Large Language model to create a personalized chatbot delivering company information, achieving a 60% improvement over the standard model.

EDUCATION AND TRAINING

15/08/2021 – CURRENT Topi, Pakistan

BACHELOR OF SCIENCE IN ARTIFICIAL INTELLIGENCE Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Thesis Generation of floor plans using Graph Neural Networks and their 3D visualization in augmented reality

01/05/2023 – 12/06/2023

SUPERVISED MACHINE LEARNING: REGRESSION AND CLASSIFICATION DeepLearning.AI, Stanford University

24/02/2023 – 20/03/2023

INTRODUCTION TO COMPUTER VISION WITH TENSORFLOW Google Cloud

PUBLICATIONS

[NeuralMango: Advanced Mango Classification and Price Prediction](#)

- The study employs the EfficientBNet2 model, achieving 97% accuracy, and utilizes a dataset of 1,200 images to address the detection of different mango types and their prices in Pakistani markets
- The paper was accepted at the 2024 International Conference on Engineering and Computing Technologies (ICECT) and published in IEEE Xplore.

S. Peerzada, M. R. Saud and D. Javed

2024

[The Impact of Boosting Algorithms on the Classification Accuracy of Skin Cancer Types](#)

- Build a CNN feature extractor to extract features from PAD UFES 20 dataset images for skin cancer diagnosis and performed data preprocessing including PCA.
- Train and evaluate boosting classifications models including CatBoost, XGBoost, and LGBM, where XGBoost achieved the highest accuracy of 73.2%.
- Found features contributing most for model to diagnose a skin cancer.

D Javed, U Arshad, H Irfan, R H Ali, T A Khan

VigilantAI: Real-time detection of anomalous activity from a video stream using deep learning

1. Prepared a dataset of over 957 photos relating to robbery and other illegal actions, and labeled using RoboFlow to meet YOLOv5 standards. Fine-tuned a YOLOv5s model to detect anomalies in real-time using CCTV footage, achieving 85% accuracy, and deployed the AI model via a web app developed in a Flask environment which can interact with wired and IP cameras.
2. Paper is accepted in 2024 International Conference on IT and Industrial Technologies (ICIT 2024).

D Javed, S Peerzada, R Saud, R Ali, N Ali

2024

Extractive Summarization of Urdu Language using Deep Learning Techniques on a Custom Dataset

1. Create a corpus of 1,00 Urdu language articles, summarize them, and generate a CSV file with columns labelled "Articles," "Topic," and "Summary." Added further attention layers in Bidirectional Encoder Representations from Transformers (BERT) model and finetuned on corpus to generate extractive summaries.
2. The Paper is presented at the 19th International Conference on Emerging Technologies (ICET'24).

D Javed, M Shehzadi, M Mansoor, S Iqbal

A Novel Approach for Sketch Colorization Using Generative AI

1. A research study on colorizing plain sketches using Generative Adversarial Networks was conducted, with modifications made to the previous GAN architecture resulting in 30% more accurate color generation.
2. Research abstract is accepted in The 5th International Electronic Conference on Applied Sciences.

D Javed, M Shehzadi, R H Ali, T Ashfaq

PROJECTS

15/08/2024 - CURRENT

Floor Plan generation and Visualization in Augmented Reality

1. Utilized Graph Neural Networks to train on floor plans dataset and develop a Django web application for user interaction that allows users to input land boundaries and needs.
2. The model generates floor plan designs based on the user's requirements and visualizes them in augmented reality by generating 3D versions.

12/03/2024 - 16/05/2024

Workout Reps Counter:

1. Developed rules using pose estimation models for several exercise repetitions to determine whether a person's posture is correct.
2. Create a mobile application with Kivy to provide a simple user experience.

02/09/2023 - 24/11/2023

Active Life

1. Built a game controller enabling users to play by acting in front of a camera utilizing pose estimation model.
2. Merging computer games with physical activities that can achieve a 30% increase in user physical activity.

DIGITAL SKILLS

Programming

Python (Numpy, Pandas, OpenCV, Sci-kit learn, SciPy, Matplotlib, BeautifulSoup, Flask, etc...) | C/C++ | Parallel computing (OpenMP) | Postgres Database | HTML & CSS

Artificial Intelligence

Machine learning (classification, regression, clustering, feature engineering) | Computer Vision (Object Detection/Segmentation, Pose Estimation, Image Classification), | Natural Language Processing: transformers, sentence-transformers, HuggingFace, spacy, & NLTK | GenerativeAI (GANs, LLM, VLM)

Write up and Graphics

Overleaf & LaTeX | MS Office (MS Word, MS Powerpoint, MS Excel, MS) | Design skills (Figma, Adobe Photoshop, Adobe Illustrator)