Anjum ALI

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Gender: Male **Date of birth:** 18/10/1993 **Nationality:** Pakistani

ABOUT ME

I am a dedicated researcher and educator with a Master's degree in Software Engineering. With over five years of teaching experience at Riphah International University and Madina Group of Colleges, I specialize in software engineering and computer science. My research has advanced disease detection in cotton and brain tumor detection using deep learning. Proficient in Python, TensorFlow, and SQL, I excel in AI and Project Management. I am eager to bring my expertise to a PhD program, where I can contribute to cutting-edge research and further develop my skills in a dynamic academic environment.

WORK EXPERIENCE

[25/10/2022 – Current] **Lecturer (Software Engineering)**

Riphah International University, Faisalabad, Pakistan

[15/08/2017 – 25/07/2021] **Lecturer (Computer Science)**

Madina Group of Colleges, Faisalabad, Pakistan

ORGANISATIONAL SKILLS

DEC (Departmental Exam Coordinator)

Department of Computing

Riphah International University, Faisalabad, Pakistan

FYP (Final Year Project) Coordinator

Department of Computing

Riphah International University, Faisalabad, Pakistan

EDUCATION AND TRAINING

[2019 – 2022] **Masters of Science (MS) in Software Engineering**

University of Agriculture, Faisalabad, Pakistan

Field(s) of study: Software Engineering | **Thesis:** Boll Rot Disease Detection in Cotton Using Deep Learning

[2013 – 2015] **Master of Science (M.Sc.) in Computer Science**

University of Agriculture, Faisalabad, Pakistan

Field(s) of study: Computer Science

[2011 – 2013] **Bachelor of Science (B.Sc.) in Computer Science**

University of Punjab, Lahore, Pakistan

Field(s) of study: Computer Science, Mathematics, Physics

CERTIFICATIONS

Artificial intelligence with Python

PIAIC (Presidential Initiative for Artificial Intelligence & Computing)

Executive Data Science

Coursera (Johns Hopkins University)

Software Project Management

Coursera (Google)

Software Quality Assurance

LinkedIn

CCNA (Routing and switching)

CORVIT Systems Faisalabad, Pakistan

PUBLICATIONS

[2024] **Automated Brain Tumor Detection via Transfer Learning Techniques**

Moeez Bin Nadeem1, **Anjum Ali1***, Muhammad Waqas Aziz1, Muhammad Umar Ghani2, Ghulam Mustafa1, and Ahmad Bilal Farooq. Journal of Computing & Biomedical Informatics, ID: 477-0701/2024. https://doi.org/10.56979/701/2024.

[2024] **BLOCKCHAIN-POWERED ACCOUNTABILITY IN PHARMACEUTICAL SUPPLY CHAINS**

M. Azam Zia, Anjum Ali, Mariam Gilani, Mehmood, D. F., Sami Ullah, & Irfan Anwar. (2024). BLOCKCHAIN-POWERED ACCOUNTABILITY IN PHARMACEUTICAL SUPPLY CHAINS. *Agricultural Sciences Journal*, (1). Retrieved from https://asj.mnsuam.edu.pk/index.php/asj/article/view/367

[2023] **Boll Rot Disease Detection in Cotton Using Deep Learning**

Reference: https://doi.org/10.56520/asj.v5i1.253

Anjum Ali, Muhammad Azam Zia, Muhammad Ahsan Latif, Sukana Zulfqar, & Muhammad Asim. (2023). A COMPARATIVE STUDY OF DEEP LEARNING TECHNIQUES FOR BOLL ROT DISEASE DETECTION IN COTTON CROPS. Agricultural Sciences Journal, 5(1), 58–71. https://doi.org/10.56520/asj.v5i1.253

DIGITAL SKILLS

My Digital Skills

Text processing (Word, LaTeX) | Python, Scikit-Learn, Numpy, Matplotlib | Pytorch,Tensorflow | Database: Oracle, SQL, SQL Lite

PROJECTS

Brain Tumor Detection via Deep Learning

- Procured medical imaging data from Kaggle.
- Developed a robust deep-learning model. Applied advanced transfer learning techniques for significant performance improvements.
- Achieved higher accuracy with optimized parameters.
- Engineered the model for speed, ensuring real-time applicability.
- Enhanced precision in brain tumor detection.
- Reduced false positives and negatives, demonstrating system reliability.
- Showcased strong AI and deep learning expertise through critical thinking in model development and optimization

Retina Scan: An application to detect Diabetic Retinopathy

- Procured dataset from Kaggle, curated and uploaded by Google.
- Trained a base model for diabetic retinopathy detection.
- Applied advanced transfer learning using ResNet-152 and EfficientNet architectures for improved model performance.
- Developed a Python Django web application for seamless implementation.
- Designed the model to classify retinal scans into two classes: one with diabetic retinopathy and the other without.
- Demonstrated leadership skills in coordinating the project team.
- Implemented a user-friendly web app interface for efficient utilization

Early Stage Skin Cancer Detection

- Utilized a Kaggle dataset for early-stage skin cancer detection.
- Increased its accuracy.
- Implemented class balancing, augmentation, and thorough data preprocessing techniques for dataset enhancement.
- Trained a base model for initial detection capabilities.
- Applied transfer learning using the EfficientNet architecture to enhance the model's performance.
- Designed and will implement the solution in a Python Django web app.
- The model accommodates multiple classes for accurate and early detection of various skin cancer stages.

LANGUAGE SKILLS

Mother tongue(s): Urdu **Other language(s):** English

REFERENCES

Dr Muhammad Amjad

Assistant Professor

Department of Computing

Riphah International University, Faisalabad, Pakistan

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Dr Muhammad Rizwan

Assistant Professor

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Ghulam Mustafa

Lecturer

Department of Computing

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