Umar Sadique

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I am a deeply committed professional, dedicated to harnessing the capabilities of Artificial Intelligence and Deep Learning to address critical challenges in disease diagnosis. I aim to secure a role within a prestigious university where I can establish a cutting-edge research institute, and a company centered around AI and automation. This venture will advance technological innovation and significantly enhance healthcare outcomes. Aspiring to be a frontrunner in AI research and automation, I am eager to deploy my expertise to solve complex and impactful problems in the healthcare industry.

PROFESSIONAL EXPERIENCE

Team Lead of Machine Learning Engineers (Remotely) — **Texas, USA**
Ayass Bioscience — April 2024 – Present

- Review reports and arrange data with feedback to enhance the product.
- Pipeline testing and ready them for deployment.
- Track our team's real-time progress.

Machine Learning Engineer (Remotely) — **Texas, USA**
Ayass Bioscience — Aug 2023 – April 2024

- Implementing ML in healthcare for predictive diagnosis.
- Explainable AI with genomic data.

Research Associate — **Peshawar, Pakistan**
National Centre of Artificial Intelligence (NCAI) — Oct 2023 – Present

- Intelligence System Design (ISD)
- Smart and Safety City
- Smart Parking Management utilizing ALPR
- Alarming System for Flood Detection
- Weather and toxic gases Prediction

Research Assistant — **Peshawar, Pakistan**
National Centre of Artificial Intelligence (NCAI) — Sept 2022 – Oct 2023

- Intelligence Information Processing Lab (IIPL)
- Artificial Intelligence in HealthCare (AIH)

Research Student — **Peshawar, Pakistan**
National Centre of Artificial Intelligence (NCAI) — April 2022 – Sept 2022

- Working on Collaborative projects with Khyber Medical University (KMU)
- Collaborative projects with KMU, the University of Qatar, and the University of Sheffield, UK

Data Collector — **Peshawar, Pakistan**
National Centre of Artificial Intelligence (NCAI) — Dec 2021 – April 2022

- Data collection and proposed device validation through AI
  - Visited different Hospitals to validate the proposed device.

EDUCATION

University of Engineering & Technology **Peshawar, Pak**
Master of Science (MSc) in Computer Systems Engineering | (3.82/4.00) April 2022 - Present
Thesis: **Exploring Deep Ensemble Classifiers with Explainable AI in HER2 Scoring: Assisting Pathologists in Breast Cancer (BCa) Diagnosis**

University of Engineering & Technology **Peshawar, Pak**
Bachelor of Science (BSc) in Electrical Communication Engineering | (3.32/4.00) 2016-2020

TRAININGS & SKILLS

- Programming (Python, C, C++, OpenCV, Deep Learning)
  - Google Colab & Kaggle for GPU
  - Jupyter, Spyder and VS Code with anaconda
  - Scikit-learn, TensorFlow, and Keras
- Power BI (DAX)
- Graphical User Interface with Python Qtdesigner and tkinter.
- WEKA statistical analysis tool.
- Dashboard design for Management of industry.
- Presentation projects to non-technical audiences.
- Leadership Skills and technical guidance.
- Tutorial course on TEX/LATEX.

Research & Publication

- Sadique, U., Khan, M., … S. A.-2023 3rd I., & 2023, undefined. (n.d.). Machine Learning based human recognition via robust Features from audio signals. Ieeexplore.Ieee.OrgU Sadique, MS Khan, S Anwar, M Ahmad2023 3rd International Conference on Artificial Intelligence (ICAI), 2023•ieeexplore.Ieee.Org. Retrieved July 20, 2023, from https://ieeexplore.ieee.org/abstract/document/10136683/?casa_token=6WUJxB5ynoYAAAAA:7XVSjxDOhPBAXsHjyQ1ujyYMo86_EKFsrIpb_AOmqztMf8E5OGOc8HQrYH3R_haUHL7SinEWyF61#

- Haq, I. ul, Khan, M., and, U. S.-P. J. of E., & 2023, undefined. (n.d.). An Intelligent Approach for Blood Cell Detection Employing Faster RCNN. Jucmd.PkI Ul Haq, MT Khan, U SadiquePakistan Journal of Engineering and Technology, 2023•jucmd.Pk, 6, 2023. Retrieved July 20, 2023, from https://jucmd.pk/journals/pakjet/article/view/2257

- Multi-Method Analysis of Histopathological Image for Early Diagnosis of Oral Squamous Cell Carcinoma Using Deep Learning and Hybrid Techniques https://doi.org/10.3390/cancers15215247

- Breast Masses Detection Using YOLOv8 https://ijrpr.com/uploads/V5ISSUE4/IJRPR25625.pdf

- Comprehensive Analysis and Optimization of Radial Distribution Feeder using ETAP https://ijrpr.com/uploads/V5ISSUE4/IJRPR25625.pdf

- Behaviour of Machine Learning algorithms with various percent of uncorrelated features (Accepted as poster presentation ICRAI 2023)

- A Patch-based HER2 Scoring of Breast Cancer Employing Soft Voting with Deep Ensemble Classifiers (*under review*)

- Exploring Deep Ensemble Classifiers with Explainable AI in HER2 Scoring: Assisting Pathologists in Breast Cancer (BCa) Diagnosis (*under review*)

AWARDS & CERTIFICATES

- Mini project leader
- PM Laptop phase – IV (HEC funded)
- Participated as a Team lead in the Global AI Challenge "Smart Cooling System for Hong Kong City."
- Best Intern certificate of the month
- Industrial Meetup on Artificial Intelligence
- Speaker of Seminar "Modern Applications of AI in Healthcare Industry."
- Co-trainer in the course of "Introduction to Artificial Intelligence" arranged by PEC.

PROJECTS

- Breast Cancer Diagnosis employing Deep Learning (KMU)
- Life prediction of the Cancer patient through clinical data (KMU)
- Oral Cancer diagnosis employing multi-model fusion. (Collaboration with the University of Sheffield)
- Thyroid cancer detection is based on an FNA test through AI. (Collaboration with the University of Qatar)
- Blood Disease detection employing Deep Learning.
- Early prediction of diseases through genomic data employing ML
- Exploring omics data for personalized medicine of rare diseases.
- Disease diagnosis with explainable AI.

SOFTWARES AND PRODUCTS

- AI predictor (Assisting Pathologist)
- BloodMatch (Let's connect two bloodmate)
- Ra'ad: The Sound Analyser (Co-founder)
- LimbTech Solution (Co-founder)

INTEREST

- Explainable AI
- Research & Programming
- To assist clinicians through AI