Yasar Mehmood

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EDUCATION

2007-2011: MS (Computer Software Engineering) from **National University of Science & Technology (NUST), Islamabad**
2001-2004: M.Sc. (Computer Science) from **Punjab University College of Information Technology (PUCIT), Lahore**
1997-1999: B.Sc. (Applied + Pure Math, Physics) from **Govt. Islamia Degree College, Kasur**
1994-1997: F.Sc. (Pre-Engineering) from **Govt. F.C. College, Lahore**

EXPERIENCE

Aug 2023 - To Date: Teaching Fellow at **Information Technology University of the Punjab**

Sep 2022 - Feb 2023: Visiting Faculty Member at **COMSATS University Islamabad, Lahore Campus**

Dec 2009 – Aug 2022: Assistant Professor at **Virtual University of Pakistan, Lahore**

Apr 2006 – Sep 2007: **E-Lecturer** at **Virtual University of Pakistan, Lahore**

Courses Teaching at Information Technology University of the Punjab
I am teaching the following courses at Information Technology University of the Punjab:
- Software Engineering
- Programming Fundamentals
- Object Oriented Programming

Courses Taught at COMSATS University Islamabad, Lahore Campus
I have taught the following courses at CUI Lahore Campus:
- Web Technologies
- Management Information Systems

Courses Tutored at Virtual University of Pakistan, Lahore
- I have tutored the following online courses during my stay at Virtual University of Pakistan:
  - Software Engineering-I (Undergraduate)
  - Software Engineering-II (Undergraduate)
  - Modern Programming Languages (Undergraduate)
  - Visual Programming (Undergraduate)
  - Human Computer Interaction (Undergraduate)
  - Software Quality Assurance (Graduate)
  - Software Design (Graduate)
  - Software Process Improvement (Graduate)
  - Formal Methods for Software Engineering (Graduate)
- I have managed a team of around 30 e-lecturers/tutors.
- I performed the following duties regarding the development of new courses:
  - Developing criteria for the shortlisting of resource persons for new courses
  - Searching and contacting the resource persons for new courses
  - Reviewing the proposed course outline and detailed contents for the new courses
  - Performing the final QA on the newly developed courses before they are offered

Research Supervision at Virtual University of Pakistan, Lahore
I have/am supervised/supervising the following MSCS students:

Graduated MSCS Students
1. **Muhammad Bilal Awan (2023) -** Brain Tumor Grade Classification using a Combination of Deep and Handcrafted Features
2. **Maria Fayyaz (2022)** - Classification of Isocitrate Dehydrogenase (IDH) Status in Gliomas using Transfer Learning

3. **Haseeb Khalid (2022)** - Prediction of 1p/19q Co-deletion Status in Lower Grade Glioma Patients using Convolutional Neural Networks
   View the thesis through the URL: https://vspace.vu.edu.pk/detail.aspx?id=750
4. **Waqas Ali (2022)** - G-Scrum: Gamified Scrum Process Model
   View the thesis through the URL: https://vspace.vu.edu.pk/detail.aspx?id=751
5. **Sadia Riaz (2019)** - Ext-SPIIM: Process Improvement Framework for Global Software Development
   View the thesis through the URL: http://vspace.vu.edu.pk/detail.aspx?id=197

FYPs Supervised at Information Technology University of the Punjab, Lahore, Pakistan.

1. **BeginnerBytes: Gamified Programming Learning Tool (Fall 2023 - Spring 2024)** - The project "BeginnerBytes" addresses the challenge of making programming language learning engaging and accessible. By employing a game-style approach inspired by the Duolingo model, "BeginnerBytes" integrates interactive challenges, quizzes, and adaptive learning.
2. **Sale Simpli (Fall 2023 - Spring 2024)** - A Point of Sale for hand held devices

FYPs Supervised at Virtual University of Pakistan, Lahore

3. **Down the Memory Lane (Spring 2017)** - A mobile app that lets users tag videos on certain locations through Google Map, and save a relevant memory (e.g. father visiting a historical place with friends). Later when the son visits the same location, the app shows a pop up containing the video relevant to that location.
4. **Location and State Sharing (Fall 2017)** - A mobile app that lets users know the exact location of his friends/family. It also allows them whether or not they are moving.
5. **Music Listening App (Spring 2018)** - The proposed mobile app allows users to tailor their music listening experience using the metadata. Each song has its associated metadata (for example, album of the song, year of release, genre, tempo and artist etc.).
6. **Ride Sharing (Spring 2019)** - This app lets users with vehicles help other users who have the closest current location and destination by giving them a lift.
7. **Uber for Hotels (Fall 2019)** - This app allows a user to easily find a suitable hotel room for stay and can be called as Uber for hotels. Hotels can make their rooms available for people to stay.
8. **Parking Space (Spring 2020)** - The app "Parking Space" provides vehicle owners or drivers with a list of parking slots for vehicles of different sizes available in the locations nearby their current location.
9. **Employees Monitoring App (Fall 2020)** - This app lets employers monitor the location of their employees during a specified time period (duty hours).
10. **Patient Care (Fall 2021)** - This app connects the volunteer caregivers to the patients/elderly in need of care. Through this app, the caregivers look after the patients/elderly people assigned to them.

CURRENT ACTIVITY

Pursuing Ph.D. (I am to submit the thesis for final evaluation) in Computer Science from CUI Lahore Campus (http://cuilahore.edu.pk/). Following is the link to my research group:
https://sites.google.com/view/mpvir/medical-imaging?authuser=0
I have completed the following courses as part of my PhD course work (CGPA: 3.96/4.00):

1. Pattern Recognition (A+ grade)
2. Independent Studies I (A grade)
3. Advanced Topics in Machine Learning (A+ grade)
4. Advanced Topics in Digital Image Processing (A+ grade)
5. Advanced Topics in Neural Networks (A+ grade)
6. Independent Studies II (A+ grade)

RESEARCH COLLABORATION

- Visiting scholar at the Arizona State University from July 25, 2022 to July 24, 2023. I was a part of Prof Jianming Liang's (https://search.asu.edu/profile/1310161) lab.
- External collaborator of Prof Anne Martel from the University of Toronto, Canada (https://medbio.utoronto.ca/faculty/martel) on the project "Optimal Pre-Training" and gaining access to the computational resources through the Digital Research Alliance of Canada as her external collaborator from December 4 2022 to December 31 2023.

RESEARCH GRANT WON

- NVIDIA Academic Hardware Grant (February, 2022) worth **USD 2400**

RESEARCH AREAS EXPLORED

- Computer Vision
- Educational Technology
- Software Process Improvement
- Medical Image Processing

ONLINE COURSES COMPLETED

Machine/Deep Learning

- "LangChain: Chat with Your Data" on Deeplearning.ai (2024).
- "LangChain for LLM Application Development" on Deeplearning.ai (2024).
- "Open Source Models with Hugging Face" on Deeplearning.ai (2024).
- Generative AI for Everyone on Coursera (2023) https://www.coursera.org/account/accomplishments/certificate/JTXK6U2V6Q74
- "LangChain: Chat with Your Data" on Deeplearning.ai (2023).
- "Building Systems with the ChatGPT API" on Deeplearning.ai (2023).
- "How Diffusion Models Work" on Deeplearning.ai (2023).
- "ChatGPT Prompt Engineering for Developers" on Deeplearning.ai (2023).
- Linear Algebra for Machine Learning and Data Science on Coursera (2023). View certificate at the link: https://coursera.org/share/9a70fc26fb2fdf56387a2fa58a791e1b
- AWS Machine Learning Foundations on Udacity (2021). View certificate at the link: https://confirm.udacity.com/AHNKXJAV
- Custom Models, Layers, and Loss Functions with TensorFlow on Coursera (2021). View certificate at the link https://coursera.org/share/b73659ebe1bb5685e57459d62429193d
- Sequences, Time Series and Prediction on Coursera (2021). View certificate at the link https://coursera.org/share/811889847164cdb65a7d2ad26c7f5ba3
- Natural Language Processing in TensorFlow on Coursera (2020). View certificate at the link https://coursera.org/share/187506f2f80a5dd2c2dfaeba37826e01
- Convolutional Neural Networks in TensorFlow on Coursera (2020). View certificate at the link https://coursera.org/share/904670685bca9f3960add0cf8b30f5ff
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning on Coursera (2020). View certificate at the link https://coursera.org/share/a10f1919b54d52c5ec7b391dd87c64bc
- Generate Synthetic Images with DCGANs in Keras on Coursera (2020). View certificate at the link https://coursera.org/share/04d98b8dcea3db7f0bab78d848392f5f
- Sequence Models on Coursera (2020). View certificate at the link https://coursera.org/share/2fd646c6807082ce441f7dc3f9f5f91f
- Structuring Machine Learning Projects on Coursera (2019). View certificate at the link https://coursera.org/share/c76d4bdbbcbf24df1bdeefc39dc81bcf
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization on Coursera (2019). View certificate at the link https://coursera.org/share/dcaae1c49e15db86d9e8dff1745d840d
- Neural Networks and Deep Learning on Coursera (2019). View certificate at the link https://coursera.org/share/58b415eaab10c2b116642d09d881a747

Statistics and Research Methodology

- Research Ethics based on the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2: CORE 2022) (June 2023), Certificate # 0000931498
- Basic Statistics on Coursera (2018). View certificate at the link https://www.coursera.org/account/accomplishments/certificate/8N6A9XDGXP3J
- Qualitative Research Methods on Coursera (2018). View certificate at the link https://www.coursera.org/account/accomplishments/certificate/QMF53LBMMS5P
- Quantitative Methods on Coursera (2018). View certificate at the link https://www.coursera.org/account/accomplishments/certificate/MGV36FX73NR7

Educational Technology

- Completed MicroMasters "Instructional Design and Technology" on EDx as verified learner containing following courses:
  - Instructional Design and Technology: Learning Theories (2017)
  - Instructional Design Models (2018)
  - Instructional Design: Digital Media, New Tools and Technology (2018)
  - Instructional Design Course Evaluation & Capstone Project (2018)

  Certificate viewable at the link https://credentials.edx.org/records/programs/shared/476fcde6f0614b01822b5d8f9707e721/

TOOLS AND TECHNOLOGIES

- Python
- Keras
- PyTorch
- AWS
- Google Cloud
- Kotlin
- HTML
- CSS
- Bootstrap
- JavaScript
- Node.js

ACHIEVEMENTS

- Merit Scholarship by Lahore Board. I received merit scholarship from Lahore Board for gaining 80% marks in middle standard exams in 1992.
- President Scholarship Examination I passed president scholarship examination held in 1992.
- I cleared IELTS in 2010 with a band of 7.5.

SOCIAL MEDIA PROFILES

- **Google Scholar**: https://scholar.google.com/citations?user=_FfQ9IQAAAAJ&hl=en
- **LinkedIn**: www.linkedin.com/in/yasar-mehmood-08631a128
- **GitHub**: https://github.com/mehmoodyasar
- **Home Page:** https://itu.edu.pk/faculty-itu/yasar-mehmood/

PUBLICATIONS

1. Zulfiqar, F., Bajwa, U. I., & **Mehmood, Y.** (2023). Multi-class classification of brain tumor types from MR images using EfficientNets. Biomedical Signal Processing and Control, 84, 104777. **IF: 5.076**
2. Ahmad, M., Bajwa, U.I., **Mehmood, Y.** et al. Lightweight ResGRU: a deep learning-based prediction of SARS-CoV-2 (COVID-19) and its severity classification using multimodal chest radiography images. Neural Comput & Applic (2023). https://doi.org/10.1007/s00521-023-08200-0. **IF: 5.102**
3. **Mehmood, Y.**, Bajwa, U. I., & Sun, X. (2022). Resource-efficient domain adaptive pre-training for medical images. arXiv preprint arXiv:2204.13280.
4. Raza, R., Bajwa, U. I., **Mehmood, Y**., Anwar, M. W., & Jamal, M. H. (2022). dResU-Net: 3D deep residual U-Net based brain tumor segmentation from multimodal MRI. Biomedical Signal Processing and Control, 103861. **IF: 5.076**
5. Tahseen Jilani, Waqas Jawaid, **Yasar Mehmood** and Syed Shah Muhammad. 2014. “Feature Selection for Agile Development through Data Mining Techniques: an Application”. In Proc. of 2nd International Conference on Computational and Social Sciences (ICCSS-14). (Rize, Turkey). Volume-2. pp. 1473-1480. August 26-28, 2014
6. **Yasar Mehmood**, Awais Majeed and Athar Mohsin Zaidi. 2013. "Incorporating Business Process Change in Information System Design”. LAP LAMBERT Academic Publishing, ISBN: 978-3-659-40971-4. Publication date: July 5, 2013.
7. **Yasar Mehmood**, Awais Majeed, 2009. “Incorporating Business Process Change in Information System Design”, CONFENIS 2009, 28-30 October, 2009, Hungary.