# MUHAMMAD ARSLAN MANZOOR

Google Scholar - marslanm.github.io

## **EDUCATION**

## Philosophy of Doctorate, Natural Language Processing

Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI), Abu Dhabi, UAE

- Research student, supervised by Prof. Preslav Nakov, Prof. Monojit Choudhury, and Dr. Shangsong Liang
- Research: "Efficiently leveraging Graph Neural Networks (GNNs) to learn the graphical media landscape for effective news media profiling"
- Major courses: Natural Language Processing, Speech Processing, Data Mining

#### Master of Science, Computer Science and Artificial Intelligence

Nanjing University of Science and Technology (NJUST), Nanjing, China

- Graduate research student supervised by Prof. Jianfeng Lu
- MS Research: "Effective use of Language Models, specifically Transformers and BERT for sentiment analysis of low resource code-switched social media text"
- Major courses: Artificial Intelligence, Computer Vision, Machine Learning, Distributed Data

#### Bachelor of Science, Information Technology

Department of Computer Science. University of & Agriculture, Faisalabad (UAF), Pakistan

Undergraduate student supervised by Dr. Muhammad Shabbir Abbasi

## **RESEARCH INTERESTS**

- Profiling mainstream media for early detection of factuality and political bias within graphical landscapes
- Evaluating the Emotional and Empathic understanding of LMs
- Enhancing the factuality of Large Language Models through Decoding and Fine-tuning techniques
- Enhancing the GNNs to alleviate the structural and labels sparsity challenges of huge media graphs
- Multi-modal learning for natural language understanding and generation task

## PUBLICATIONS

Can Machines Resonate with Humans? Evaluating the Emotional and Empathic Comprehension of LMs (Paper) (sub. ARR-2024) Muhammad Arslan Manzoor, Yuxia Wang, Minghan Wang, Preslav Nakov

MGM: Global Understanding of Audience Overlap Graphs for Predicting the Factuality / Bias of News Media (Paper) (ARR-2024) Muhammad Arslan Manzoor, Ruihong Zeng, Preslav Nakov, Shangsong Liang

A Survey on Predicting the Factuality and the Bias of News Media ( <mark>Paper)</mark> Preslav Nakov, Jisun An, Haewoon Kwak, <b>Muhammad Arslan Manzoor</b> , Zain Muhammad Mujahid, Husrev Taha Sencar	(ACL-2024)
Factuality of Large Language Models in the Year 2024 ( <mark>Paper)</mark> Yuxia Wang, Minghan Wang, <b>Muhammad Arslan Manzoor</b> , Fei Liu, Georgi Georgiev, Rocktim Jyoti Das, Preslav Nakov	(sub. ARR-2024)
FRAPPE: FRAming, Persuasion, and Propaganda Explorer (Paper) Ahmed Sajwani et al.	(EACL Demo-2023)
Multimodality Representation Learning: A Survey on Evolution, Pretraining and Its Applications (Paper) Muhammad Arslan Manzoor, Sarah Albarri, Ziting Xian, Zaiqiao Meng, Preslav Nakov, Shangsong Liang	(ACM-2023)
Contrastive Self-Supervised Learning: A Survey on Different Architectures (Paper) Adnan Khan, Sarah Albarri, <b>Muhammad Arslan Manzoor</b>	(ICAI-2022)
Lexical Variation and Sentiment Analysis of Roman Urdu Sentences with Deep Neural Networks (Paper) Muhammad Arslan Manzoor, Saqib Mamoon, Son Kei, Ali Zakir, Muhammad Adil, Jianfeng Lu	(IJACSA-2020)
SPSSNet: a real-time network for image semantic segmentation (Paper) Saqib Mamoon, <b>Muhammad Arslan Manzoor</b> , Faen Zhang, Zakir Ali, Jianfeng Lu	(ITEE-2020)
Multi Scale-Adaptive Super-Resolution Person Re-Identification Using GAN (Paper) Muhammad Adil, Saqib Mamoon, Ali Zakir, <b>Muhammad Arslan Manzoor</b> , Zhichao Lian	(IEEE Access-2020)

Sept. 2017 – June 2020 CGPA 3.54/4.00

Oct. 2013 – May 2017

CGPA 3.45/4.00

CGPA 3.82/4.00

August 2021 - May 2025

## PhD Researcher

EXPERIENCE

Department of Natural Language Processing, MBZUAI, Abu Dhabi, UAE Main research topics: Media Profiling, News Media Graphs, Graph Neural Networks, Multimodal Learning

- Enhancing the GNNs to alleviate the structural and labels sparsity challenges of huge media graphs
- Profiling mainstream News Media at outlest level through graphical composition to detect factuality and bias

#### **Research Officer**

Centre of Language Engineering, Al-Khwarizmi Institute of Computer Science, UET, Lahore, Pakistan Main research topics: Conversational AI, Urdu Chatbot, Low resource language understanding

- Wroked on open-source RASA framwork to build the AI based Urdu language Chatbot / Voicebot
- Collected, preprocessed and annotated real conversational stories to train NLU / NLP module for Urdu Chat/Voice Bot

#### **Research Assistant (Remote)**

Umm Al Qura University, Mecca, Saudi Arabia Main research topics: Conversational AI, Language Models

- Assistant to Professor Anas Basalamah, working on AI conversational Projects
- Investigating deep learning model for natural language understanding and paraphrasing tasks

#### **Graduate Research Assistant**

School of Computer Science and Engineering, Nanjing University of Sci. and Tech., Nanjing, China Main research topics: Deep Neural Networks, Language Models, Transformers

- Explored LMs (Language Models) for the sentiment analysis of low resource code switch data on social media
- Collaborated with colleagues to leverage CNNs for semantic segmentaion and Person re-identification tasks

## **TECHNICAL SKILLS**

Languages: Python, C++/C#, SQL, PHP, HTML/CSS, JavaScript Frameworks: PyTorch, Keras, Hugging-face, Latex, NLTK, Scikit-learn Tools: Linux, PyCharm, VS code, Git, Amazon Cloud Platform

# SUMMER SCHOOLS / INTERNSHIPS

- Attended Summer Program 2019 for Future Smart City in Shanghai Jiao Tong University
- Completed a 10-week Chinese language course at Nanjing University, China
- IT Intern at Pakistan Telecommunication Landline (PTCL), Faisalabad, Pakistan
- Completed a Deep Learning Course for Image and Natural Language Processing from deeplearning.ai.
- Completed a Web Development Course covering front-end, back-end, and frame-based development

## HONOURS AND AWARDS

- Fully funded PhD scholarship holder at MBZUAI, Abu dhabi
- Fully funded Masters scholarship holder from Chines Scholarship Council
- · Undergraduate merit based scholarship holder
- · Award holder from Chief Minister of Government of Pakistan
- Elite Scholarship holder in High school

## ACADEMIC SERVICES

- Served as a reviewer at TOIS-2023, AACL-2023
- Served as a mentor to UGRIP internship program for NLP-01,02 projects at MBZUAI
- Served as volunteer at EMNLP 2022 Abu Dhabi, UAE
- Teaching assistant for the course NLP-801 (Deep Learning for NLP)

## OTHER INTERESTS

Book reading, Exploring culture & Traveling, Playing badminton & soccer, Listening podcasts

July 2020 - July 2021

Nov 2020 - July 2021

Aug 2018 - July 2020

Dec 2021 – Present