# MUHAMMAD **ARSLAN** MANZOOR

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LinkedIn: LinkedIn portfolio

## EDUCATION

**Philosophy of Doctorate, Natural Language Processing**                    August 2021 – May 2025
*Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI), Abu Dhabi, UAE*                    *CGPA 3.82/4.00*

- Research student, supervised by Prof. Preslav Nakov 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**                    Sept. 2017 – June 2020
*Nanjing University of Science and Technology (NJUST), Nanjing, China*                    *CGPA 3.54/4.00*

- 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**                    Oct. 2013 – May 2017
*Department of Computer Science,*                    *CGPA 3.45/4.00*
*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
- Enhancing the GNNs to alleviate the structural and labels sparsity challenges of huge media graphs
- Enhancing the factuality of Large Language Models through Decoding and Fine-tuning techniques
- Multi-modal learning for natural language understanding and generation task

## PUBLICATIONS

A Survey on Predicting the Factuality and the Bias of News Media                    *(submitted to ARR-2024)*
*Preslav Nakov, Jisun An, Haewoon Kwak, **Muhammad Arslan Manzoor**, Zain Muhammad Mujahid, Husrev Taha Sencar*

MediaGraphMind (MGM): Memorizing Media Graphs for Factuality and Bias                    *(submitted to KDD-2024)*
***Muhammad Arslan Manzoor**, Ruihong Zeng, Preslav Nakov, Shangsong Liang*

Factuality of Large Language Models in the Year 2024 (Paper)                    *(submitted ot IJCAI-2024)*
*Yuxia Wang, Minghan Wang, **Muhammad Arslan Manzoor**, Fei Liu, Georgi Georgiev, Rocktim Jyoti Das, Preslav Nakov*

FRAPPE: FRAming, Persuasion, and Propaganda Explorer                    *(submited to EACL Demo-2023)*
*Ahmed Sajwani et al.*

Multimodality Representation Learning: A Survey on Evolution, Pretraining and Its Applications (Paper)                    *(ACM-2023)*
***Muhammad Arslan Manzoor**, Sarah Albarri, Ziting Xian, Zaiqiao Meng, Preslav Nakov, Shangsong Liang*

Contrastive Self-Supervised Learning: A Survey on Different Architectures (Paper)                    *(ICAI-2022)*
*Adnan Khan, Sarah Albarri, **Muhammad Arslan Manzoor***

Lexical Variation and Sentiment Analysis of Roman Urdu Sentences with Deep Neural Networks (Paper)                    *(IJACSA-2020)*
***Muhammad Arslan Manzoor**, Saqib Mamoon, Son Kei, Ali Zakir, Muhammad Adil, Jianfeng Lu*

SPSSNet: a real-time network for image semantic segmentation (Paper)                    *(ITEE-2020)*
*Saqib Mamoon, **Muhammad Arslan Manzoor**, Faen Zhang, Zakir Ali, Jianfeng Lu*

Multi Scale-Adaptive Super-Resolution Person Re-Identification Using GAN (Paper)                    *(IEEE Access-2020)*
*Muhammad Adil, Saqib Mamoon, Ali Zakir, **Muhammad Arslan Manzoor**, Zhichao Lian*

## EXPERIENCE

**PhD Researcher**                                                                                    Dec 2021 – Present
*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**                                                                                    Nov 2020 – July 2021
*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)**                                                                        July 2020 – July 2021
*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**                                                                        Aug 2018 – July 2020
*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