



National University of Sciences and Technology (NUST)
School of Electrical Engineering and Computer Science

16th September 2024

Letter of Recommendation for Mr. Haseeb Muhammad

It is my great pleasure to provide recommendation for Mr. Haseeb Muhammad who has worked under my research and academic supervision for the past year. Before continuing with providing my comments about Haseeb's potential, I would like to briefly introduce myself. I am a Professor at School of Electrical Engineering and Computer Science (SEECs) in National University of Sciences and Technology (NUST), Islamabad where I have been teaching for the past six years. Additionally, I am also an Adjunct Professor at the School of Computer Science and Software Engineering at The University of Western Australia in Perth, Australia. I am also the director of Deep Learning Lab (DLL) at National Center of Artificial Intelligence (NCAI), NUST, Islamabad, Pakistan. My research interest is in machine learning with a primary focus on computer vision and document image analysis and having raised funding of over 105 Million PKR, I maintain highly active research collaborations with various funding agencies including Higher Education Commission (HEC) Pakistan, German Academic Exchange Service (DAAD), Pakistan Science Foundation (PSF) and National ICT RDF. I also received the IAPR/ICDAR Young Investigator Award by the International Association of Pattern Recognition in 2019 and have recently been included in the list of the World's Top 2% Scientists compiled by Stanford University.

Haseeb started working as a research intern at the TUKL-NUST R&D Center in 2023 after passing a competitive selection process at the lab. Despite having only completed his freshmen year, he had demonstrated his aptitude for learning and his remarkable ability to grasp complex concepts in deep learning quickly. During this time, he worked on a project titled "Feature extraction using co-salient object detection models". He implemented state-of-the-art co-salient object detection models using renowned datasets in this area. Furthermore, he also used vision-based techniques for dataset preprocessing for preparation of a custom dataset for wheat rust disease detection.

Haseeb was selected for a three-month research internship at the Rheinland-Pfalz Technical University, Kaiserslautern, Germany, under DAAD scholarship program from June to August 2024. During this internship, he focused on segmenting wheat rust disease from wheat leaves. He developed and implemented a custom pipeline that improved both the speed and accuracy on the NUST Wheat Rust Disease (NWRD) benchmark dataset. Haseeb is currently improving the results, which is expected to result in a publication.

In my opinion, Haseeb is a motivated learner and has gained knowledge of deep learning models and hands-on experience, making him well-prepared for your prestigious program. I have no doubt that Haseeb will uphold the standards of your institute and will prove to be a valuable addition to your program.

Best Regards,

Prof. Dr. Faisal Shafait

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September 16, 2024

To whom it may concern

This is to certify that Mr. Haseeb Muhammad visited Microelectronic Systems Design Research Group (EMS), University of Kaiserslautern-Landau (RPTU), Germany for a summer internship from 04-June-2024 to 31-August-2024. During his internship, he was responsible for implementing segmentation based deep learning models for wheat rust disease using co-salient feature extraction. Currently, Haseeb is continuing his work on improving the accuracy of the deep learning models. This work shows promise and could lead to a journal publication.

Throughout the internship period, Haseeb consistently maintained a high level of performance. He is always open to suggestions from superiors and has the ability to analyse and solve problems independently. I have confidence that the skills and insights gained during his internship will undoubtedly serve him well in his future endeavours. Based on my experience with him, I highly recommend Mr. Haseeb Muhammad for your program.

Sincerely,


Dr.-Ing. Christian Weis
