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# **Mobility Report**

**Muhammad Ali Arif**

**University of the West of Scotland (UWS)**

**Dates of Visit: 24-07-2024 – 14-08-2024**

- Name: Muhammad Ali Arif
- Institution: COMSATS Islamabad, Wah Campus, Pakistan
- Host Institution: University of the West of Scotland (UWS)
- Dates of Visit: 24-07-2024 – 14-08-2024

### **1. Presentation on Fetus Movement Monitoring Belt**

- I demonstrated the working of fetus movement monitoring belt. I have also presented the test result of the belt. The attendees showed agreement with this novel contribution by CUI team in SAFE-RH Project. Also, the complete development process and the sensor technologies used to monitor fetal heart rate, uterine contractions, and fetal movements was described. This device is aimed at enhancing prenatal care by providing real-time monitoring data to healthcare providers.

### **2. Fetus Heart Rate Doppler Device Presentation**

- Also, I presented the Fetus Heart Rate Doppler Device. The Doppler device presentation covered its capabilities in monitoring fetal blood flow and detecting potential complications in pregnancy. We demonstrated the Doppler's role in identifying abnormalities that may impact maternal or fetal health. Also the customization carried out in Doppler by the CUI was discussed in various technical aspects.

### **3. Maternal Remote Monitoring Kit Presentation:**

- Finally, I presented the updated version of the maternal remote monitoring for vital signs for timely intervention.

### **4. Discussion and Feedback:**

- UWS faculty and students engaged in discussions regarding the technical aspects and potential applications of the devices. The feedback provided helped identify areas where the devices could be adapted to specific clinical needs in the UK healthcare context.

### **5. Conclusion**

The SAFE-RH mobility visit to the University of the West of Scotland was highly productive and facilitated deep technical discussions, knowledge sharing, and hands-on collaboration. The presentations and demonstrations were well received by both council members and the technical team at UWS. This mobility laid a solid foundation for future collaborative research between COMSATS Wah and UWS, particularly in advancing maternal health technologies.



# **Visit Report on the University of the West of Scotland, United Kingdom**

by

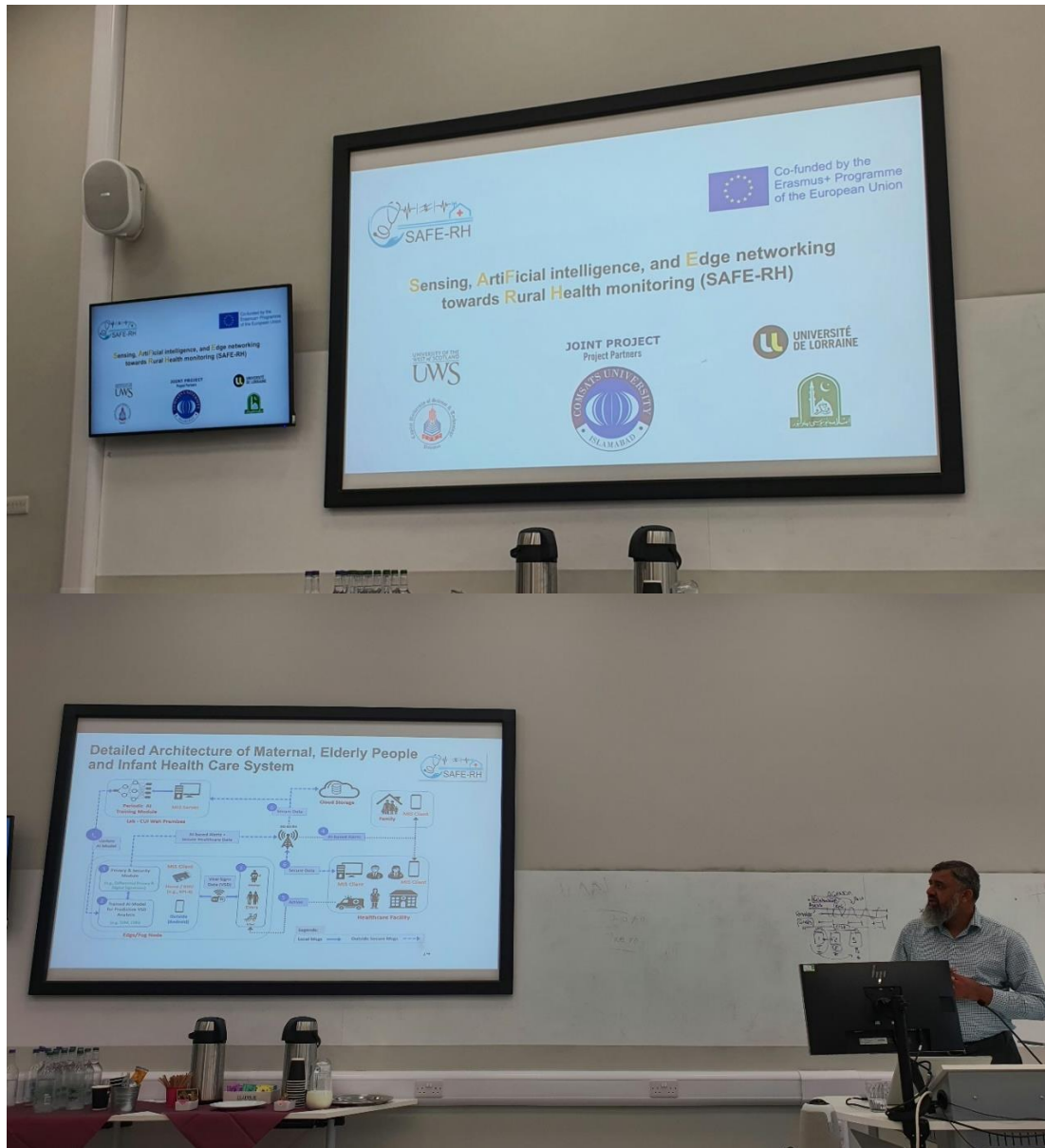
**Ahmad Hassan**

From **24-07-24** to **14-08-24**

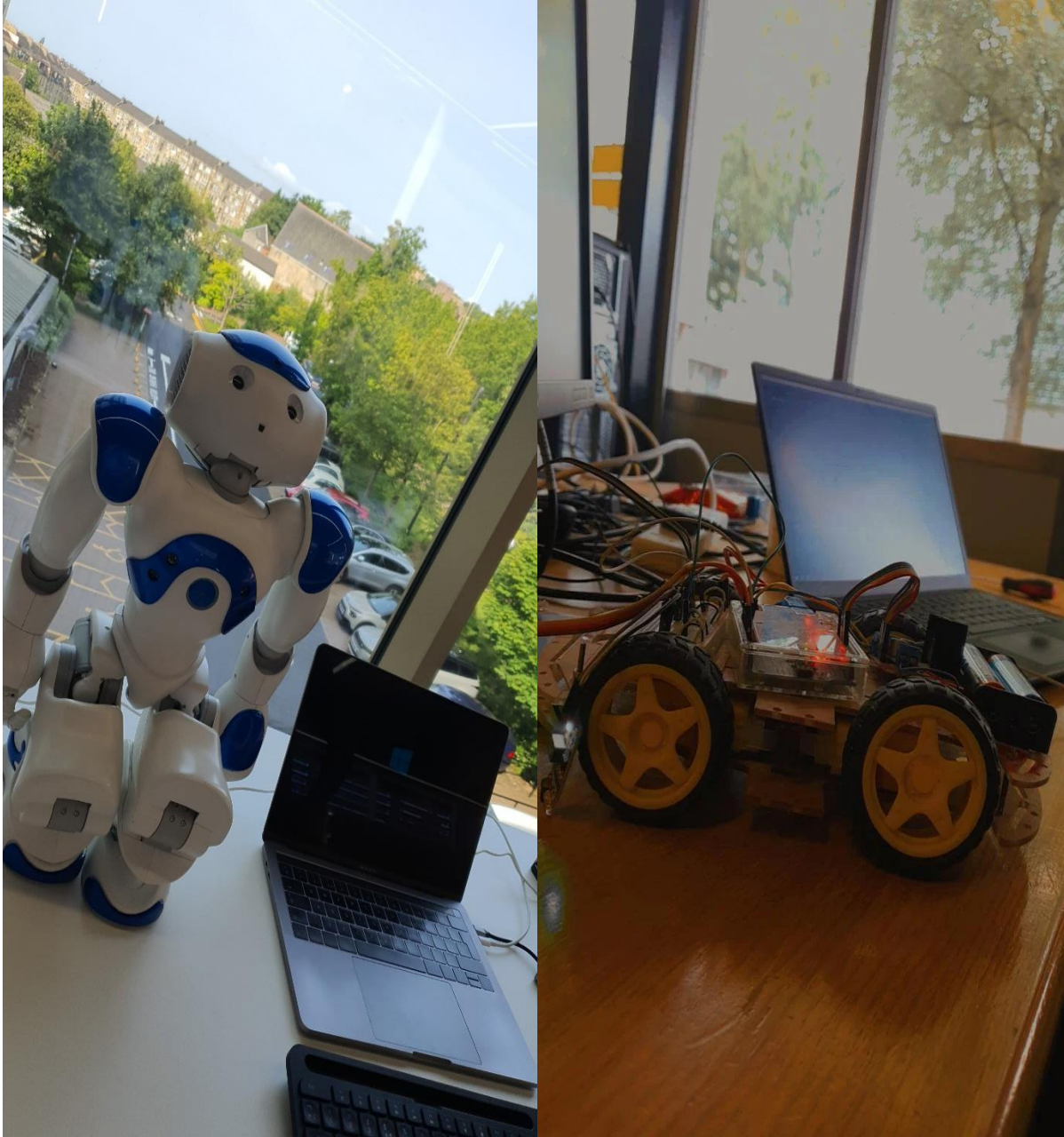
After my three-week research training/internship at University of the West of Scotland (UWS) in the United Kingdom (UK) through the SAFE-RH Program, I am excited to share the insights and experiences I gained. The main goal was to enhance my academic and professional skills, focusing on collaborative learning, hands-on training, poster presentations, and completing a research paper titled “Enhanced Model for Gestational Diabetes Mellitus Prediction Using a Fusion Technique of Multiple Algorithms”.



I thoroughly enjoyed the one-week presentation sessions from all the partner universities. It was a fantastic opportunity to learn valuable presentation skills, including how to effectively handle the Q&A sessions. I also gained insights into creating engaging presentation content. The diverse range of topics and styles presented by different universities broadened my perspective and enhanced my understanding of effective communication and technology trends. Overall, this experience significantly improved my ability to present complex ideas clearly and confidently.



Connecting with PhD students and other members at UWS was a highlight of my visit. Through our discussions and shared experiences, I gained diverse perspectives on ongoing research projects. These interactions not only broadened my understanding of various fields but also fostered a sense of community and collaboration. The dynamic and intellectually stimulating environment in the lab encouraged me to think critically and creatively. I was inspired by the innovative ideas and approaches shared by my peers, which significantly enriched my research experience.



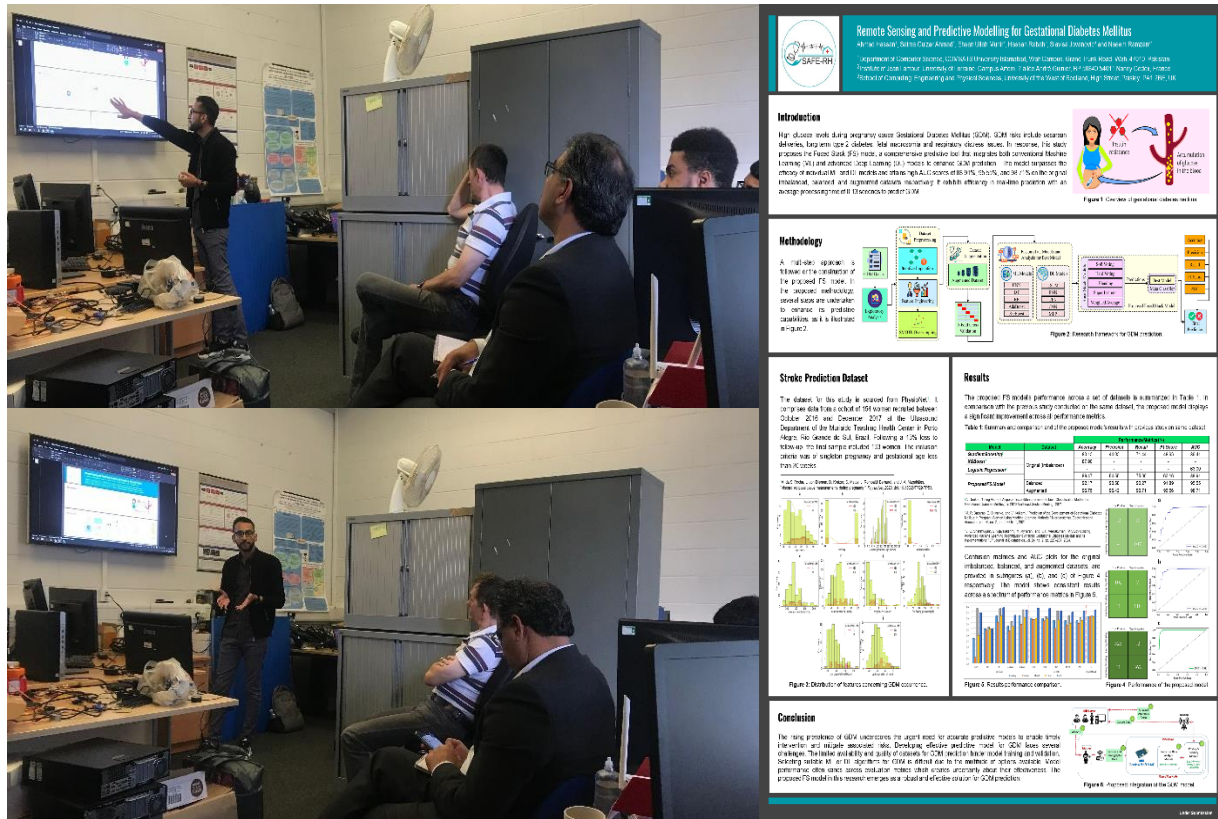
Exploring advanced lab devices like robots and sensors gave me a unique hands-on experience. This exposure expanded my technical skills and deepened my understanding of their practical applications. My visit mainly focused on writing my research paper and gathering new ideas for my PhD. I refined my research, sought guidance from mentors, and presented my work to the academic community. Participating in the SAFE-RH program also allowed me to contribute to a real-world research initiative, blending theory with practical application of the technology.





During my visit, Mr. Ali Arif and I set up the fetus monitoring belt and Doppler under the supervision and guidance of Dr. Saima Gulzar Ahmad. This project was a significant part of meeting. The presentation allowed to showcase the practical applications of the work, and the team received valuable feedback from the academic community and special guests. This

experience not only broadened our understanding of the technology but also strengthened our ability to communicate complex ideas effectively. Overall, it was a rewarding and enriching part of my visit, contributing significantly to my academic and professional growth.



I presented my previous research work titled “Remote Sensing and Predictive Modelling for Gestational Diabetes Mellitus”. The presentation focused on main research methodology framework and its superior results. Moreover, it shows how this research can be incorporated into the SAFE-RH project. It showed my understanding of the existing body of work and identified further research exploration area. The presentation served as a platform for feedback from mentors and peers. The feedback contributed to the refinement of my research direction. This task allowed me to highlight the outcomes of my efforts and receive constructive insights from the academic community.



In conclusion, my research internship in the UK was an unforgettable experience that I will always cherish. Engaging with peers, exploring advanced lab devices, and contributing to innovative programs have all shaped my academic and professional growth. Reflecting on this journey, I am eager to apply these new skills and perspectives to my future research. I extend my heartfelt thanks to COMSATS University Islamabad, Wah Campus, UWS, the SAFE-RH Project, and the dedicated teachers and mentors who guided me. Their support and knowledge played a crucial role in my development. I am truly grateful for the chance to contribute to the academic community and for the invaluable lessons learned. The internship certificate I received is a testament to the skills gained and contributions made during this transformative period.

