

Proceedings of the 7th MEC Student Research Conference on Artificial Intelligence and Cyber Security

01 May 2025, Muscat, Oman

MECSRC 2025

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Preface

We are delighted to present the proceedings of the 7th edition of the Middle East College Student Research Conference (MECSRC 2025). The conference serves as an esteemed platform that brings together students, researchers, and academics to share innovative ideas and research outcomes. The theme for this year's conference is "AI & Cyber Security", reflecting the rapidly evolving role of artificial intelligence in shaping secure, intelligent, and data-driven systems across diverse disciplines.

The MEC Student Research Conference 2025 featured research contributions from various academic disciplines, including Computer Science, Electronics & Communication Engineering, Civil Engineering, Mechanical Engineering, Management Studies, Language and Educational Studies, and Archives and Records Management. The conference provided a collaborative environment for showcasing emerging ideas, exchanging knowledge, and promoting interdisciplinary discussions in the field of artificial intelligence and cybersecurity applications.

The technical program consisted of student research papers, poster presentations, and interactive discussions covering a broad range of topics. These included machine learning algorithms for cybersecurity, AI-powered threat detection and response, deep learning for malware detection, AI in structural and environmental engineering, robotics in mechanical systems, predictive maintenance, AI in management and decision-making, and AI-enabled educational platforms. The conference also explored the ethical, legal, and social implications of AI, highlighting the responsibility that accompanies innovation.

The success of this conference is attributed to the guidance and leadership of the organizing team. We express our sincere gratitude to our General Chair, Dr. Saleh Al Shaaibi, Dean of Middle East College, Muscat, for his continued encouragement and support. We would also like to acknowledge the contributions of our Co-Chairs, Dr. Alya Al Farsi, Assistant Dean of Academic Affairs, and Dr. Ahmed Nawaz Hakro, Assistant Dean of Research and Innovation, for their insightful direction throughout the planning and execution of the conference.

Special thanks are due to the Conference Organizing Committee, including Dr. Santhosh John, Ms. Shyamala Srinivas, Dr. Ram Kishore Manchiryal, Dr. Ezzat Saad Hassan Ahmed, and Dr. Samia Naqvi, for their dedication and tireless efforts in ensuring the success of this event. We also extend our appreciation to all the students and faculty members who submitted their research papers and actively participated in this academic endeavor.

We firmly believe that the MEC Student Research Conference continues to serve as a vibrant forum for fostering research culture and innovation among students, while inspiring future researchers to explore the transformative potential of artificial intelligence across various domains. We are confident that the ideas and discussions presented in this edition will contribute significantly to the advancement of knowledge and inspire future initiatives in AI and cybersecurity research.

Dr. Saleh Al Shaaibi
Dr. Alya Al Farsi
Prof. Ahmed Nawaz Hakro

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