**Gulf Research Centre Cambridge**

Knowledge for All

**14ᵗʰ Gulf Research Meeting**

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**Workshop No. 8**

**Navigating the Future of Artificial Intelligence in the GCC Region:**

**Opportunities and Challenges**

## 1. Directors

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## 2. Abstract

The Gulf Cooperation Council (GCC) countries and the world as a whole are going through an important historical turning point because of the developments brought about by Artificial Intelligence (AI) applications. AI applications and technologies have affected many industries as well as diverse economic and social policy sectors. On the one hand, such developments in the field of AI are providing new opportunities that different industries and socio-economic and technical sectors can benefit from. On the other hand, AI technologies and applications have also presented unique ethical, regulatory, and socio-economic challenges that governments in the GCC countries must deal with effectively. The primary goal of this workshop is to assess the state of the field of AI in the GCC countries and anticipate the future of how to employ its technologies to maximize returns and reduce potential risks that may be associated with the expansion of its use in certain fields. In order to harness the potential of AI, the GCC countries should develop an ecosystem that can maximize the AI benefits and at the same time protect end users from any risks that the use of AI technologies may cause.

## 3. Context

Artificial intelligence is developing in the GCC region at an accelerated pace, and today we are dealing with its applications in many areas of our daily lives. Artificial intelligence techniques deployed in our homes, cars, and workplaces using the Internet of Things require efficient distributed

designs but have immense benefits in many critical applications (Baccour et al., 2022). Additionally, the topic of artificial intelligence gains special importance for the GCC countries due to its intersection with many of the strategic social and economic goals as well as sustainable development, healthcare, education, labour market, and economic diversification policies in this region (Hanafi et al., 2021; Khan et al., 2022; Sharfi, 2021). The presence of artificial intelligence in many aspects of life in modern societies means that individuals and governments will struggle between its legal and ethical implications for some time (Al-Qadi et al., 2023). Hence, the rapid increase in AI applications in the GCC region raises fundamental questions about the potential impact of intelligent applications on the daily lives of humans. As time passes, AI technologies gain a foothold in new industries and become more immersed in our daily lives, and this trend appears to continue in the GCC for the foreseeable future (Al-Sulaiti, 2023).

Despite the advantages of employing artificial intelligence in various sectors, its activities and applications pose many socio-economic and security challenges to public policymakers in the GCC region (Hassib & Shires, 2022). From a regulatory perspective, artificial intelligence applications raise fundamental questions about the ethical, legal, and regulatory determinants that govern the use of these applications (Badran, 2021). In this context, one has the right to wonder whether artificial intelligence applications in the GCC countries will lead to a better life and more efficient use of available resources, or negatively impact human activities. Will the impacts of AI disproportionately benefit higher-skilled workers, potentially exacerbating income and wealth inequality? (Wright and Erbad, 2023)

AI applications cannot be considered an absolute good or bad thing (Al-Ali et al., 2023). Rather, a reality that affects our lives in different ways, provides opportunities, and at the same time, creates many challenges. In order for the Gulf countries to be able to maximize the benefits and reduce the risks resulting from the expansion of the use of artificial intelligence applications in their society, they should take advantage of the opportunities offered by this new field. They also need to develop policies and strategies that enable them to confront challenges in an effective and successful manner.

## 4. Focus/objectives

In light of the overall goal of the workshop, which is to explore the state of the art of AI in the Arabian Gulf region in terms of its reality and future, this workshop attempts to achieve the following goals:
- Exploring and assessing the current trends in the GCC countries regarding the adoption of AI applications and determining the impact of these applications on the various sectors in these countries.
- Analysing the public risks associated with the expansion of the use of AI applications in the GCC countries and the impact of these potential risks on Gulf societies.
- Investigating the economics and social effects of artificial intelligence and automation on the job market (higher-skilled vs. lower-skilled workers), and the needed changes in curricula, training, and academic programs.
- Reviewing and evaluating the strategies and public policy frameworks developed by the Arab Gulf countries to face the challenges associated with the expansion of the use of AI applications.
- Analysing case studies of some GCC countries that were able to develop an effective regulatory framework to deal with the challenges of AI.
- Bridging the gap between decision-makers and policy-makers in the GCC countries and researchers interested in the field of AI, so that the policies and frameworks regulating this field are based on the evidence of their research.

## 5. Papers focus/topics

This workshop will have four general themes (T1 to T4) to address the topic at hand of AI and in the GCC.

T1 – Theoretical Developments in the Area of AI: This track covers the developments in the field of AI at the theoretical and conceptual levels.

T2 – AI: Technology & Infrastructure: This track addresses issues related to the infrastructure of AI in the GCC countries. It also discusses the technological and technical considerations related to the development of this vital sector in the countries of the region.

T3 – AI: Policy & Economy: This track focuses on aspects related to policies and regulatory frameworks for AI in the GCC countries. The track also addresses the impact of existing and future legislative/regulatory frameworks on various economic sectors, including labour markets, education, health care, industry, trade, and other public policy sectors in the GCC countries.

T4 – AI: Society: This track aims to understand the possible social impacts of AI applications on societies in the GCC countries. This will be done by shedding light on the most pressing societal issues related to the expansion of AI applications, most importantly the ethical frameworks that govern the use of such applications and the extent to which these ethical aspects fit with the values, customs, and traditions of Gulf societies.

Paper proposals should fit as closely as possible with this workshop description, notably section 4, and the publication plans (section 7).

## 6. Paper structure, referencing, and format

The papers presented to the workshop will focus on the reality and future of artificial intelligence in the countries of the Arab Gulf region in the various sectors that are witnessing a boom in AI applications. Each paper will be divided into a theoretical framework followed by an applied part or a case study of one of the countries in the Gulf region.

Authors should also adhere to the GRM Paper Guidelines.

Participants who do not submit a paper by the 31 May 2024 deadline or whose submitted paper does not meet the requirements will be disinvited by GRCC.

## 7. Publication plans

An edited book to be published in the Scopus-indexed Palgrave Macmillan Book Series the Political Economy of the Middle East, London, New York, and Singapore. We aim to attract chapters on all six member states of the GCC. The proposed book will be organized as follows:

Part One: AI: A theoretical and conceptual framework
1.1 The origins and development of AI
1.2 AI - theoretical foundations
1.3 The importance of AI in modern societies

Part Two: AI in the GCC countries: The state of the art
2.1 An overview of the uses of AI in the GCC countries
2.2 AI: challenges and opportunities

Part Three: AI and transformations of industries in the GCC countries
3.1 How does AI affect the oil and gas industries?
3.2 Applications of AI in the financial sector and trade
3.3 Improving healthcare through AI

Part Four: The regulatory and legislative framework for AI in GCC countries
4.1 Regulatory frameworks and their impact on AI applications
4.2 Security and privacy in the age of AI
4.3 Government role in promoting AI

Part Five: AI impact on education and skills development
5.1 The impact of AI on the labour market
5.2 Skills development and education programs in the field of AI
5.3 The role of R&D in developing AI in the region

Part Six: AI in the Gulf countries: A future outlook
6.1 Future expectations for the uses of AI in the GCC
6.2 Future challenges and how to overcome them.
6.3 Consensus on the importance of AI technology in the GCC

Papers that may not be publishable in the edited volume will still be reviewed by the directors and considered for individual publication in either a peer-reviewed journal or as a GRM paper. Directors will make reasonable efforts to ensure that all accepted papers are published in one of these three forms.

## 8. References

Al-Ali, Sukaina Al-Amrani, and Al-Tawzani, Mohammed. (2023). the Future of Artificial Intelligence: The Metaverse Model. Journal of Law and Business, Issue 88, 256-278. Retrieved from http://search.mandumah.com/Record/1361491.

Al-Sulaiti, Dhabya Saeed Faraj. (2023). Artificial Intelligence: Qatar's Efforts and Achievements as a Model. Culture and Development, Vol. 23, Issue 190, 161-183. Retrieved from http://search.mandumah.com/Record/1404420.

Baccour, E., Mhaisen, N., Abdellatif, A.A., Erbad, A., Mohamed, A., Hamdi, M. and Guizani, M. (2022). Pervasive AI for IoT applications: A survey on resource-efficient distributed artificial intelligence. IEEE Communications Surveys & Tutorials.

Badran, A. (2021). Thoughts and Reflections on the Case of Qatar: Should Artificial Intelligence Be Regulated? In E. Azar & A. N. Haddad (Eds.), Artificial Intelligence in the Gulf (pp. 69–92). Springer Singapore. https://doi.org/10.1007/978-981-16-0771-4_5

Wright, S., Erbad, A. (2023) the Strategic Implications of AI: A Roadmap for Future Engagement, Global Institute for Strategic Research, 2023.

## 9. Directors' bio notes

**Dr. Ahmad Badran** is an Associate Professor of Public Policy at the Department of International Affairs, College of Arts and Sciences, Qatar University. Dr. Badran holds a Ph.D. in Public Policy from the University of Exeter, the United Kingdom. Dr. Badran has also worked as a Postdoctoral Research Fellow at Aston Centre for Critical Infrastructure and Services (ACCIS), Aston Business School, Aston University, Birmingham, the UK. Dr. Badran's research interests extend to cover different areas of regulatory governance and politics of regulation, particularly in transition and developing economies. At present, Dr. Badran is focusing on investigating the regulatory implications of AI and the different possible approaches for AI governance. In this respect, Dr Badran is working on a number of publications related to AI regulation and governance in addition to a number of papers that have been published in this area.

**Dr. Ashraf Mishrif** is the founding director and research chair of the Oman Chamber of Commerce and Industry Research Chair for Economic Studies, Sultan Qaboos University, Oman. Before that, he was an Associate Professor at King's College London and taught at various universities including Qatar University, Ahmed bin Mohammed Military College Qatar, Anglia Ruskin University Cambridge, and the University of Greenwich, London, UK. He assumed several executive posts including Cultural Advisor for the Egyptian Embassy Cultural Bureau in London, Managing Director of the London-based consulting firm EU-Med International, and International Advisor and member of the Academic Board of Directors, Boston Business Management School, Singapore. Dr. Mishrif is an expert in economic development and the political economy of the Middle East, with a special focus on the Gulf region. He established and led several research clusters, masters, and doctoral programs in political economy, foreign direct investment, international trade, economic diversification, and Euro-Arab economic relations. Dr. Mishrif manages several strategic research projects and regional development programs, with a research budget of US$1.2 million and 32 research staff.