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Shaping the Future: AI Adoption and Strategic Opportunities in Ras Al Khaimah

Sharon Aruparayil

Executive Summary

Artificial Intelligence (AI) is reshaping industries and governance worldwide, and Ras Al Khaimah (RAK) is well-positioned to harness its potential for economic and societal advancement. This policy paper evaluates RAK's AI adoption across critical sectors, including public safety, industrial operations, and sustainable development, and identifies progress, challenges, and strategic opportunities for integration.

Drawing from research conducted between August 2023 and August 2024, the study highlights RAK's achievements in deploying AI technologies while emphasizing the need for localized strategies tailored to its unique industrial and economic landscape. Key findings reveal the importance of public-private partnerships, AI-focused education, and robust ethical governance frameworks.

The paper provides a detailed analysis of AI adoption trends in RAK, examining advancements in infrastructure, industry collaboration, and capacity-building efforts. It incorporates insights from interviews, surveys, and operational data from stakeholders in government, industry, and education. Recommendations include expanding AI applications in key sectors, improving workforce readiness through targeted education and training, and fostering innovation to align with the National AI Strategy of the United Arab Emirates (UAE). Additionally, the paper underscores the importance of developing localized governance frameworks to ensure ethical AI implementation, safeguard data privacy, and promote responsible AI use. Finally, a roadmap is presented for leveraging AI to drive RAK's economic transformation and societal progress, ensuring the emirate remains a dynamic contributor to the UAE's national AI vision.

Introduction

The rise of AI is shaping economies and societies globally, and the UAE stands at the forefront of this transformation. Over the past two years, advancements in AI have continued to drive innovation, improve efficiency, and inform decision-making across various sectors. However, these rapid developments also highlight concerns related to privacy, data transparency, and ethical governance that require thoughtful consideration.

Globally, nations are leveraging AI to enhance governance and public services, offering valuable insights into its potential benefits and risks. For example, Estonia's e-Residency program utilizes AI to streamline identity verification, facilitating seamless access to government services for individuals and businesses worldwide (Pirrmets, 2024). At the same time, these systems raise questions about data security and potential misuse. Similarly, Singapore's Smart Nation initiative integrates AI to optimize urban planning and resource management, enhancing public safety and environmental sustainability (Zhang, 2021). While such initiatives demonstrate the benefits of AI, they also underscore challenges, including over-reliance on automated systems and potential biases in algorithmic decision-making.

Within the UAE, recent initiatives have reinforced its leadership in AI adoption. Projects like Dubai's AI-driven traffic management systems, Abu Dhabi's predictive healthcare technologies, and the use of AI in renewable energy forecasting exemplify the nation's commitment to leveraging technology for progress. The Mohamed bin Zayed University of Artificial Intelligence continues to contribute to cutting-edge research, enhancing the UAE's position as a global AI hub. However, as AI integration expands, it brings challenges such as safeguarding data privacy, ensuring transparent governance, and addressing the societal implications of automation.

AI's projected contribution of up to 14% to the UAE's GDP by 2030 illustrates its economic significance, but realizing this potential requires addressing both opportunities and risks. National initiatives like the UAE AI Strategy 2031 and Gov 3.0 provide a robust framework for ethical AI adoption (Halaweh, 2018). However, challenges related to regulatory oversight, inclusivity, and the equitable distribution of AI benefits persist, emphasizing the importance of a balanced approach.

In Ras Al Khaimah (RAK), these opportunities and challenges are particularly pronounced. Between August 2023 and August 2024, the emirate made notable progress in applying AI to areas such as public safety, industrial operations, and sustainable development. These advancements reflect RAK's alignment with the UAE's broader AI vision while highlighting the need for strategies that consider its specific economic and social contexts. The emirate's focus on developing technological infrastructure and promoting STEM education positions it to advance AI adoption. However, localized governance frameworks, enhanced stakeholder engagement, and targeted capacity-building initiatives could strengthen its approach to AI integration.

This policy paper provides an analysis of RAK's progress in AI adoption, informed by research conducted between August 2023 and August 2024. The study highlights key advancements, identifies ongoing challenges, and proposes strategies to support the effective integration of AI across public and private sectors. Drawing from a detailed assessment of RAK's AI landscape and recent developments, the paper offers insights into the emirate's efforts to harness AI for sustainable growth. Emphasizing principles of transparency, inclusivity, and collaboration, the recommendations aim to enhance RAK's capacity to navigate the complexities of AI implementation while maximizing its potential benefits.

Background

Artificial Intelligence (AI) is revolutionizing policymaking, transforming how governments develop, execute, and assess public policies. This section explores how AI enhances efficiency, augments human expertise, and provides real-world examples to showcase its impact on various sectors, from public safety to healthcare.

Enhancing Efficiency

AI introduces a paradigm shift in policy formulation by automating complex tasks like data collection, trend identification, and analysis. Traditionally, these activities have been human-intensive and time-consuming. AI streamlines this process, enabling quicker decision-making. For instance, AI can gather and analyze vast amounts of data from various sources, identify patterns, and offer insights that help governments implement evidence-based policies (Umoga et al., 2024).

However, while automation increases efficiency, it also comes with limitations. The speed at which AI processes data could lead to oversights, especially if critical nuances are lost in translation. For example, relying solely on algorithmic outputs in policy development could result in oversimplified solutions that miss the contextualized understanding of social issues (Chaisatitkul et al., 2024). To prevent this, human oversight remains critical, ensuring that AI-enhanced decision-making still reflects the intricacies of real-world policy challenges.

For example, in urban planning, AI has demonstrated its capability to improve efficiency by analyzing data on traffic, energy consumption, and population demographics. AI insights help policymakers design more efficient, sustainable, and citizen-focused cities. However, the accuracy and representativeness of input data are crucial. Biases or incomplete datasets can distort outcomes, leading to skewed decisions that might unintentionally reinforce social inequalities (Sanchez et al., 2022).

Beyond Automation: Augmenting Human Expertise

AI extends beyond simple automation by enhancing human expertise, particularly in policy development, through data-driven insights that aid decision-making (Brynjolfsson & McAfee, 2014). While AI excels in processing large volumes of data and simulating policy scenarios, the integration of human judgment remains essential for interpreting AI-generated recommendations within broader ethical and social frameworks (O'Neil, 2016). AI can provide predictive analytics, suggesting optimized strategies and forecasting potential outcomes, but these insights must be evaluated in light of human values and societal norms (Binns, 2018).

In sensitive sectors like healthcare and criminal justice, where decisions have significant moral implications, AI's recommendations must be carefully assessed (Raji et al., 2020). AI algorithms, while efficient, may lack the ability to account for complex ethical dilemmas, such as biases or inequities in the data they process (Noble, 2018). Therefore, a balance between AI's capabilities and human oversight is necessary, ensuring that decisions align with principles of fairness, equity, and justice (O'Neil, 2016).

Moreover, as AI systems become more integral to policymaking, ethical frameworks and data auditing mechanisms must be established to ensure accountability and transparency. Policies that govern AI integration should include provisions for regular auditing of algorithms to identify and mitigate biases (Burrell, 2016). A collaborative approach, where human expertise guides AI's data processing power, will allow for a more nuanced and ethically sound use of AI in policymaking.

In conclusion, while AI can significantly augment human decision-making, its successful implementation in policymaking requires careful integration with human judgment and an established ethical framework. This combined approach will ensure that AI serves not only as a tool for efficiency but also as a means of fostering fairness and societal well-being.

AI in Policymaking: Global Examples

Globally, AI has been successfully integrated into public policy, improving decision-making and resource optimization across various sectors. These examples could potentially illuminate the path toward evidence-based policies, improved citizen engagement, and resource optimization.

Healthcare: Predicting Disease Outbreaks

In healthcare, AI is being used to predict and manage disease outbreaks. During the COVID-19 pandemic, AI systems analyzed population movements, health data, and environmental factors to detect potential hotspots and enable timely interventions. These predictive models allow governments to allocate resources efficiently, manage healthcare capacities, and implement preventive measures before an outbreak escalates (Sun & Medaglia, 2019).

Despite its utility, the use of AI in healthcare raises concerns around data privacy and ethical management of sensitive patient information. Additionally, there may be challenges in achieving widespread adoption due to resistance from healthcare professionals, concerns about job displacement, and the need for significant investments in infrastructure and training (Reddy et al., 2018).

Public Safety: Crime Prediction and Prevention

AI has also transformed public safety through predictive policing systems. In Chicago, AI-driven models analyze historical crime data, weather patterns, and socioeconomic variables to predict potential crime hotspots, allowing law enforcement to allocate resources proactively (Henman, 2020).

While this approach has reduced crime rates, the use of AI in policing is controversial, as biases in historical data can lead to discriminatory practices against marginalized communities (Alsamhi et al., 2019). Additionally, there are ethical considerations regarding the potential misuse or over-reliance on AI in decision-making, raising questions about accountability, transparency, and the need for human oversight in public safety operations.

Education: Personalized Learning

AI's role in education policy is advancing through personalized learning systems like Khan Academy and Coursera. These platforms use AI to tailor educational content to individual learning needs, leading to improved outcomes and skill development (Balica, 2018). However, the collection and analysis of student personal data raise privacy concerns, highlighting the need for robust data protection measures (Gulson & Witzenberger, 2020).

Environmental Policy: Climate Change Mitigation

AI plays a significant role in environmental policy by helping governments simulate and model the impact of climate-related initiatives. These AI-driven simulations inform policy decisions aimed at reducing carbon emissions, preserving ecosystems, and fostering sustainability (van Wynsberghe, 2021). While these models provide actionable insights, their effectiveness depends on the quality and accuracy of the input data, and AI's inability to fully account for the complexity of environmental systems may introduce uncertainties in decision-making (Sætra, 2021).

In conclusion, the integration of AI into policymaking offers significant advantages, from enhancing efficiency to augmenting human decision-making. However, it also raises critical ethical and practical concerns, particularly around data quality, biases, and human oversight. As governments around the world continue to embrace AI, a balanced approach that combines AI's technical capabilities with ethical considerations and human judgment will be essential for ensuring that AI-driven policies truly serve the public good. These lessons are crucial as RAK navigates its own journey toward AI-enhanced governance.

Methods and Findings: Comprehensive Analysis of AI Integration in RAK

Study Overview

This study was conducted to explore the state of AI adoption in RAK across various sectors, including government, education, public safety, and economic zones. The research spans two phases: the initial exploratory phase in August 2023, which focused on emerging AI projects, and a follow-up in August 2024, which evaluated the real-world impact of AI implementations over a year.

Phase 1: Data Collection in August 2023

Methodology: In August 2023, data collection primarily involved **17 semi-structured interviews and 4 site visits.** Key stakeholders from economic entities, public services, educational institutions, and data-forward agencies in RAK were interviewed to gather insights on early-stage AI initiatives. These interviews were semi-structured, allowing for open-ended discussions about AI adoption, challenges, and strategic objectives.

The focus of this phase was on understanding the **initial explorations of AI**, the challenges faced, and the sectors poised to benefit from AI adoption.

Findings from Phase 1:

Economic Zones: Interviews with key stakeholders from RAK's economic zones revealed that AI adoption is still in its early stages. The chief strategy officer of a leading economic entity shared that AI holds substantial potential for enhancing decision-making, particularly in areas like pricing and digital transformation. However, they also emphasized the challenges associated with AI integration, stating, *"While AI can optimize decision-making and streamline operations, privacy and security concerns remain a significant barrier, and there is a lack of clear regulatory support, making it difficult to fully commit to large-scale AI adoption."* Departments such as pricing, quality assurance, and digital transformation are testing AI solutions for business optimization, yet the adoption process has been slow due to the absence of comprehensive regulatory frameworks. This caution is further compounded by concerns over the return on investment, with businesses cautious about the tangible benefits of AI without clear guidelines to ensure its effective use.

Public Service: In RAK's public services sector, AI applications are being explored to enhance operational efficiency and public safety. For example, automated vehicle inspections and law enforcement analytics are being piloted to improve accuracy and speed. However, public service managers have noted several key challenges. One manager explained, *"The learning curve for AI systems is steep, and it requires extensive collaboration with third-party providers who are experts in the technology. Additionally, trust in AI systems is still developing, and some staff members are hesitant to rely on machines for critical decision-making."* These challenges underscore the complexities of integrating AI into public services, where human oversight and expertise remain essential to ensure the systems' reliability and fairness. While AI presents clear benefits in improving operational efficiency, the need for training and ongoing support is critical to overcoming these challenges and ensuring AI systems are adopted effectively and ethically.

Education Sector: Educational institutions in RAK have begun exploring the potential of AI to enhance teaching efficiency, particularly in areas such as plagiarism detection and curriculum design. AI has the capacity to support administrative tasks, allowing educators more time to focus on personalized teaching. However, as one head of secondary education emphasized, *"AI can certainly power teacher efficiency, but without proper training, teachers may not be able to harness its full potential."*

A significant concern among educators is the over-reliance on AI, particularly by students using AI tools for creative writing assignments. This has led to fears that students may bypass critical thinking and research processes, relying instead on AI-generated content. Teachers are noticing that students may not be developing the essential skills needed for independent problem-solving and critical analysis. Consequently, schools are grappling with how to incorporate AI into the classroom while ensuring students remain engaged in the learning process, developing their creativity, and honing their research capabilities.

Given these challenges, there is a strong need for comprehensive teacher training on the responsible and effective use of AI in education. In addition, many institutions are developing ethical guidelines and creating phased implementation plans to integrate AI in a way that complements rather than replaces traditional teaching methods. These measures aim to strike a balance between leveraging AI for administrative efficiency and maintaining the emphasis on developing students' critical thinking and creative skills.

Data-driven Agencies: Data-driven agencies in RAK have adopted a structured approach to integrating AI technologies, emphasizing skills development and the responsible use of AI. These agencies prioritize robust data management frameworks and the application of open-source models to address privacy concerns, ensuring that data is used in a way that aligns with ethical standards. Despite these proactive efforts, several challenges have emerged in the process of AI integration.

One of the key difficulties faced by these agencies is securing sufficient funding to support the full implementation and scaling of AI projects. The high costs associated with AI technology, infrastructure, and the need for continuous training and development present financial barriers that hinder rapid adoption. Additionally, data privacy and security remain central concerns, particularly when dealing with sensitive datasets. While the agencies have adopted open-source models to improve transparency, navigating complex data anonymization protocols remains a significant hurdle. Proper anonymization is crucial to ensuring that AI models do not inadvertently compromise the privacy of individuals or organizations. Overcoming these challenges requires a concerted effort to develop clearer regulatory guidelines and secure the necessary resources for continued innovation in AI adoption.

Phase 2: Data Collection in August 2024

Methodology: By August 2024, the research shifted from exploratory discussions to assessing the **tangible impact** of AI deployments across the same sectors. This was assessed through government communications, news articles, follow-up interviews with selected stakeholders and public information about AI deployment in RAK.

Findings from Phase 2

Predictive Analytics in Industry

In 2024, through follow-up interviews, we found that RAK's key industries are increasingly incorporating AI-powered predictive analytics, allowing them to optimize processes, forecast trends, and improve overall efficiency:

- A leading pharmaceutical company in RAK: This regional leader in pharmaceuticals is transforming its operations with AI. Using predictive analytics, the company has improved its supply chain efficiency by 15% and reduced waste by 20%. By analyzing historical production data and market trends, it has been able to adjust output, ensuring that products are manufactured and distributed more efficiently, reducing bottlenecks and enhancing resource management.

- A leading ceramics manufacturer in RAK: As one of the largest ceramic manufacturers globally, this company has adopted AI-driven forecasting tools to better predict market demands and customer preferences. This has allowed them to enhance inventory management, align production with market demand, and reduce lead times. The result is a more streamlined production cycle, greater customer satisfaction, and a more agile response to market shifts.

Autonomous Operations

RAK is also becoming a hub for autonomous operations, with a growing focus on AI-powered systems such as drones, autonomous vehicles, and robotic machinery:

- Autonomous Logistics and Manufacturing: AI-driven autonomous systems are rapidly being adopted across RAK's logistics and manufacturing sectors. These technologies, which include automated warehouses and AI-powered transport systems, promise to reduce operational costs by up to 40%, increase production output by 25%, and accelerate delivery times. For instance, drone deliveries are being piloted to meet the increasing consumer demand for faster and more reliable services.

AI's Impact on Business Operations: Case Studies

RAK's business landscape is also experiencing transformation through AI applications in customer service and sustainability:

- **AI Chatbots in Banking:** AI-powered chatbots, such as those deployed by leading banks in the UAE, have revolutionized customer service in the banking sector. One bank's chatbot has handled over 2 million chats since its launch, improving efficiency by 30%. Another bank's chatbot, operational since 2018, has reduced customer wait times by 50%, increasing customer satisfaction by 40%. These chatbots provide immediate and automated responses, allowing banks to manage high volumes of inquiries while freeing up human staff for more complex tasks.

- **AI in Sustainable Development:** AI is playing a critical role in RAK's sustainability initiatives. A RAK-based utility provider is using AI to optimize water treatment processes and monitor energy consumption. Through real-time data analysis and predictive maintenance, the company has reduced energy usage while maintaining the emirate's clean water supply. Similarly, a construction management company is utilizing AI to cut project timelines by 30% and reduce costs by 20%, enhancing environmental sustainability through more efficient resource use.

AI Research and Development

- **Establishment of ATAIC (2023):** The Advanced Technology and Artificial Intelligence Center (ATAIC) at the American University of Ras Al Khaimah (AURAK) has emerged as a leading research hub for AI and Information and Communications Technology (ICT). Since its establishment in 2023, ATAIC has focused on developing AI solutions for real-world challenges, such as improving infrastructure and fostering innovation in industries like healthcare, logistics, and education. ATAIC's contributions have solidified RAK's status as a regional leader in AI research and development.
- **Establishment of RAK DAO (2023):** His Highness Sheikh Saud bin Saqr Al Qasimi inaugurated the RAK Digital Assets Oasis (RAK DAO), a free zone dedicated to fostering innovation in digital assets, Web3, and AI sectors. RAK DAO provides a platform for entrepreneurs in emerging technologies like blockchain, NFTs, and DAOs, offering full business ownership and the flexibility to establish tax and regulatory frameworks within the bounds of UAE criminal law. The free zone supports startups through grant programs and tailored assistance in technical, marketing, and business development, positioning RAK as a hub for digital innovation.

Safe City Project and AI Surveillance Systems (2024)

- **Safe City Project:** By 2024, the Safe City Project in Ras Al Khaimah became fully operational, leveraging AI to enhance public safety. AI-powered surveillance systems monitor traffic patterns, helping to reduce accidents and optimize law enforcement efforts. These systems also use AI's predictive capabilities to prevent crime, improving resource allocation for emergency services and enhancing overall safety. AI-powered traffic management systems have been instrumental in reducing congestion, contributing to RAK's broader smart city vision.

Conclusion

As of 2024, Ras Al Khaimah's integration of AI across various industries highlights its commitment to leveraging cutting-edge technology to drive growth and innovation. From optimizing industrial processes to enhancing public safety, AI's role in shaping RAK's future is unmistakable. As the emirate continues to align itself with the UAE's broader AI strategy, these advancements position RAK to become a key player in the nation's journey toward a tech-driven future.

A Tailored AI Strategy for RAK: Detailed Recommendations for Future Growth

As RAK continues to evolve as a center of industrial growth and innovation, the integration of AI offers unprecedented opportunities to enhance the emirate's economic and social landscape. While the UAE's National AI Strategy 2031 sets a strong national vision, RAK's unique industrial profile and challenges require a more customized AI strategy that addresses local needs. By aligning its AI initiatives with both national objectives and regional strengths, RAK can achieve sustainable growth and solidify its role as a leader in AI-driven development.

The Bedrock of AI Integration: Building on Existing Foundations

RAK has already made significant progress in AI adoption, particularly in industries such as pharmaceuticals, manufacturing, and public safety. To continue this trajectory, RAK's AI strategy should be built on two foundational elements:

- Leveraging Existing AI Infrastructure: RAK has successfully implemented AI-powered systems, such as chatbots and predictive analytics, across key sectors like banking and manufacturing. These established systems provide a strong base to scale AI applications into other industries, fostering cross-sector collaboration and innovation.

- Harnessing Emerging AI Innovations: Autonomous technologies and AI-driven sustainability solutions demonstrate RAK's potential to adopt more advanced applications. By prioritizing sectors like utilities and construction, where AI has already shown measurable success in resource optimization and project management, RAK can further lead in sustainable and innovative AI integration.

To maximize the benefits of these advancements, a comprehensive and localized AI strategy is essential.

Key Recommendations: A Roadmap for AI Growth

1 Develop a RAK-Specific AI Strategy

While the UAE's National AI Strategy provides a broad framework, RAK must tailor its approach to the specific needs of its economy, industries, and population. Local industries such as manufacturing, logistics, and tourism present distinct opportunities and challenges that require customized AI solutions.

Recommendations

- **Sectoral Focus:** RAK's AI strategy should prioritize industries where AI has already proven effective, such as logistics, manufacturing, and public safety. In manufacturing, for example, AI can be leveraged to improve predictive maintenance and optimize inventory, leading to cost savings and enhanced efficiency. Logistics companies could further integrate AI to streamline supply chains, reducing transportation time and costs.

- **Localized Applications:** Ensure the strategy incorporates AI tools that are directly aligned with the unique challenges of RAK, such as its geographic position as a logistics hub and its growing tourism sector. AI can be used to personalize tourist experiences, enhance the efficiency of transport systems, and improve resource management in large events.

2 Expand Public-Private Partnerships

Collaboration between public institutions and private firms has been a key driver of AI innovation in RAK. To continue fostering AI growth, stronger partnerships with global AI innovators and local businesses are essential.

Recommendations

- **Collaborations:** Encourage partnerships between RAK-based companies and international AI firms to accelerate the development of AI solutions tailored to local needs. For instance, partnering with global logistics firms could introduce new AI-based methods of optimizing cross-border trade.

- **Support Innovation Hubs:** Provide funding and resources for innovation hubs like ATAIC to ensure that RAK remains at the cutting edge of AI research and development.

3 Strengthen AI in Public Safety and Urban Governance

The success of the Safe City Project in 2024 underscores AI's ability to improve public safety. Scaling these efforts will not only enhance safety but also improve traffic management and urban planning.

Recommendations

- **Expand AI Surveillance Systems:** Scale AI-driven surveillance systems across RAK's urban areas to reduce traffic accidents and optimize emergency response times. Real-time data collection and analysis can help law enforcement proactively prevent crimes and improve traffic flow.

- **Smart City Initiatives:** Integrate AI into broader smart city projects to create a more connected and efficient urban infrastructure. AI could be used to manage energy consumption, waste management, and environmental monitoring, aligning with RAK's sustainability goals.

4 Support AI in Sustainable Development

Sustainability is a core priority for RAK, and AI has the potential to drive growth in sectors like water management, construction, and energy efficiency.

Recommendations

- **AI in Utilities:** Expand AI-driven technologies to optimize water treatment and energy consumption. AI's real-time monitoring capabilities can help RAK reduce its environmental footprint while ensuring resource efficiency.
- **Sustainable Construction:** Encourage more firms to adopt AI solutions in construction. AI can be used to model building designs, optimize materials usage, and ensure projects are both cost-efficient and environmentally sustainable.
- **Renewable Energy Integration:** Use AI to optimize the integration of renewable energy sources, such as solar and wind, into the emirate's power grid. AI could predict energy demand and supply fluctuations, improving grid stability and resource allocation.

5 Promote AI Education and Skill Development

Building local expertise in AI is crucial to ensuring that RAK can sustain its AI initiatives over the long term. By investing in education and skill development, the emirate can create a talent pool that supports its AI-driven economy.

Recommendations

- **Partnerships with AURAK:** Strengthen ties between industry and academia by increasing funding for AI research at institutions like **AURAK** and encouraging AI-focused curricula. Courses on AI ethics, data science, and machine learning can help prepare the next generation of AI specialists.
- **International Collaborations:** Forge partnerships with global universities and tech companies to provide training and certification programs for RAK's workforce. These programs should focus on practical AI applications relevant to the emirate's industries.
- **Upskill the Workforce:** Invest in reskilling and upskilling initiatives for workers in traditional industries. AI education can enable employees in sectors such as manufacturing and logistics to work alongside AI systems, increasing productivity and minimizing job displacement.

Conclusion

By developing a tailored AI strategy that addresses its unique economic landscape and industrial challenges, RAK can fully harness the potential of AI. Expanding AI integration across sectors like logistics, manufacturing, public safety, and sustainability will drive economic growth and enhance the quality of life for its citizens. Public-private partnerships, educational initiatives, and targeted investments in AI-driven technologies will ensure that RAK remains a leader in the UAE's AI-powered future.

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Note on Data and Temporal Context

The data and findings presented in this paper are based on research conducted between August 2023 and 2024. The latest update was made on 7th January 2025. Readers should be aware that the field of artificial intelligence is rapidly evolving, with new advancements and trends emerging regularly. Consequently, some insights and conclusions drawn in this paper may not fully encompass the most recent developments. We encourage readers to consider the timeframe of the research while interpreting its implications.

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- to inform policy making by conducting and commissioning high quality research;
- to enrich the local public sector, especially education, by providing educators and civil servants in Ras Al Khaimah with tools to make a positive impact on their own society; and
- to build a spirit of community, collaboration, and shared vision through purposeful engagement that fosters relationships among individuals and organizations.

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مؤسسة الشيخ سعود بن صقر القاسمي
لبحوث السياسة العامة

Tel: +971 7 233 8060 • Fax: +971 7 233 8070, P.O. Box 12050, Ras Al Khaimah, United Arab Emirates
E-mail: info@alqasimifoundation.rak.ae