

# MA' MOON ALDMOUR

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I am a highly motivated and experienced academic professional with a strong passion for teaching and a commitment to fostering student success at the university level. My goal is to take on a challenging teaching role in a dynamic and intellectually stimulating environment, where I can contribute meaningfully to the education of future generations while further enhancing my pedagogical expertise. With a background as a lecturer and web applications developer, I bring a deep understanding of effective teaching methodologies and a proven ability to inspire and guide students in their academic pursuits. My technical expertise spans the design and development of Internet of Things (IoT) systems, including microcontrollers and sensors, with a focus on their integration with web technologies and Blockchain (Ethereum) for security and decentralization. I am also skilled in Python programming for IoT applications and the development of dashboards for IoT monitoring and management.

## Experience

MARCH. 2025 – PRESENT

**Assistant Professor of Cybersecurity | Faculty of Science and Information Technology – Alzaytoonah University of Jordan | Amman, Jordan**

NOV. 2020 – FEB 2023

**Assistant Dean for Quality and Development | School of Graduate Studies – University of Jordan | Amman, Jordan**

- Analyze program trends to identify areas of improvement and recommend corrective actions.
- Conferred with educators to identify current classroom concerns and diversify instructional strategies.
- Promoted continuous improvement by problem-solving and sharing suggestions to optimize team operations.
- Typed and edited documents and presentations for manager.

JAN. 2009-OCT. 2020

**Web Developer and Designer | The University of Jordan | Amman, Jordan**

- Developed scalable software applications for optimal performance.
- Managed databases with strong SQL skills.
- Improved web development plans to achieve client requirements within assigned timeframes.
- Wrote clean, clear and well-tested code for various projects.
- Built databases and table structures using database tools for web applications.

JUN 2008-DEC 2008

**Computer Programmer | Al-Balqa Applied University | Karak, Jordan**

SEP 2001-JUN 2008

**Computer Programmer | Ministry of Education | Karak, Jordan**

## Skills

Lecturer of Different Courses at UJ and PSUT, Data Analytics Tools (KNIME, RapidMiner) • Python Programming • Ethereum Blockchain development • Microsoft SharePoint (Administration and Design) • Microsoft Visual Basic .NET • ASP.NET • HTML5, CSS, JavaScript, jQuery • Microsoft Office • IoT microcontrollers • Websites Development (Wordpress, Joomla) • Project management software • Team player • Excellent time management skills.

## Education

04/2021 – 10/2024 (PHD)

**Doctor of Philosophy, Computing | Staffordshire University | Stoke-on-Trent, UK**

2002/2004 (VERY GOOD)

**MSc, Computer Information System | Arabic Academy for Banking and Financial Studies | Amman, Jordan**

1996/2000

**B.Sc., Computer Science | Mu'tah University | Karak, Jordan**

## Certificates

MCAD: Microsoft Certified Application Developer • MCP: Microsoft Certified Professional • A+ (Hardware and Operating System) • Net +

## Ph.D. Project

### **Machine Learning-Driven Real-Time Prioritization System for ICUs with Blockchain Security**

This project demonstrates a key aspect of my ability to combine state-of-the-art AI and machine learning techniques with Blockchain technology to manage critical patient data securely. I leveraged my technical background in AI and machine learning to apply a Random Forest Classifier with 99.53% accuracy to detect life-critical patterns in vital signs and accelerate the prioritization of critical data for medical providers. By integrating Blockchain, the system ensures the immutability and transparency of critical patient data, which is essential in high-stakes healthcare environments.

My expertise in pre-processing and analysis of data, as well as my familiarity with AI/ML platforms and libraries, allowed me to seamlessly deploy the predictive model in the architecture using the Predictive Model Markup Language (PMML). The integration of Blockchain technology added an extra layer of security, ensuring that all real-time updates to patient data are encrypted, timestamped, and permanently recorded on a tamper-proof ledger. Additionally, my skill in programming languages such as Python, JavaScript, and C++ facilitated the embedding of AI solutions into existing healthcare systems, enabling real-time updating of patient data alongside immutable Blockchain records. Knowledge of generative AI models contributed to the system's novel aspects, while my understanding of Blockchain protocols ensured robust security and compliance with data governance standards.

Project management methodologies contributed to the efficient management of the development process. Working in interdisciplinary teams enabled me to collaborate with medical doctors, data scientists, and Blockchain experts to design systems tailored for critical healthcare use cases. This collaboration ensured that the system met both the technical and practical needs of ICU environments. The outcome is an innovative architecture where real-time machine learning analytics meet Blockchain-based data management. This represents a quantum leap in patient monitoring and care in ICUs. The system exemplifies the Blockchain of Things (BCoT) architecture, applied to a fast-paced and highly dynamic healthcare environment. By focusing on the integration of Blockchain as a security tool, the system not only optimizes the speed of analysis and response but also reinvents the way critical healthcare data is managed and decisions are made.

## Published Research

1. **Aldmour, M., & Aldmour, R. & Al-Zoubi, A., & Sedky, M., (2025) *Optimizing Off-Chain Storage in Blockchain of Things Systems: Implementing Dockerized IPFS for Enhanced Efficiency*, International Journal of Online and Biomedical Engineering (iJOE).**
2. Al-Zoubi, A., **Aldmour, M.**, Khoury, A., Al-Thaher, D. (2024).”***Blockchain of Things for Securing and Managing Water 4.0 Applications.*** International Journal of Online and Biomedical Engineering (iJOE), 20(11), pp. 4–15. <https://doi.org/10.3991/ijoe.v20i11.50277>
3. Al-Zoubi, A. Y., **Dmour, M. ., & Aldmour, R.** (2022). ***Blockchain as a Learning Management System for Laboratories 4.0.*** International Journal of Online and Biomedical Engineering (iJOE), 18(12), pp. 16–34. <https://doi.org/10.3991/ijoe.v18i12.33515>.
4. A. Al-Zoubi, T. Saadeddin, **M. Dmour** and L. Adi, "An Interactive IoT-Blockchain System for Big Data Management," 2022 4th IEEE Middle East and North Africa COMMunications Conference (MENACOMM), Amman, Jordan, 2022, pp. 71-76, <https://doi.org/10.1109/MENACOMM57252.2022.9998263>.
5. Al-Zoubi, A., **Aldmour, M.**, & Aldmour, R. (2022). “**Preserving Transparency and Integrity of Elections Utilizing Blockchain**” Technology. *Journal of Telecommunications and the Digital Economy*, 10 (4), 24–40. <https://doi.org/10.18080/jtde.v10n4.626>
6. M. Castro, A. Al-Zoubi, B. Hammad and **M. Aldmour**, "Flipped MOOCs as a Pathway towards Education 4.0," 2022 IEEE Learning with MOOCs (LWMOOCs), Antigua Guatemala, Guatemala, 2022, pp. 10-15, doi: <https://doi.org/10.1109/LWMOOCs53067.2022.9927772>.
7. Al-Zoubi, A., Saadeddin, T., & **Dmour, M.** (2023). ***An Ethereum Private Network for Data Management in Blockchain of Things Ecosystem.*** International Journal of Online and Biomedical Engineering (iJOE), 19(01), pp. 38–58. <https://doi.org/10.3991/ijoe.v19i01.35261>
8. Al-Zoubi, Abdallah; **Dmour, Mamoun;** Sedky, Mohamed; Aldmour, Rakan. “**Blockchain Utilization in Cyber-Physical Laboratories for Engineering Education 4.0**”, 20th International Conference on Remote Engineering and Virtual Instrumentation, 2023, Thessaloniki, Greece.

9. A. Al-Zoubi and M. Aldmour, "**Blockchain for Management of Virtual Internationalization in Higher Education**," 2023 IEEE Global Engineering Education Conference (EDUCON), Kuwait, Kuwait, 2023, pp. 1-8, doi: 10.1109/EDUCON54358.2023.10125236.
10. Al-Zoubi, A. Y., & Aldmour, M. (2023). **Refining the Process of Credit Transfer of MOOCs with the Utilization of ChatGPT and Blockchain**. *International Journal of Emerging Technologies in Learning (iJET)*, 18(18), pp. 23–34. <https://doi.org/10.3991/ijet.v18i18.43089>
11. Abdallah Al-Zoubi, Majed Abu Jaber, Adnan Atoum, Bashar Hammad and Mamoun Dmour, "A Model for Jordanian National Qualifications Framework", *Journal of Education and Human Development*, Vol. 8, No. 3, pp. 101-112, 2019, <https://doi.org/10.15640/jehd.v8n3a12>.
12. Adnan Atoum, Abdallah Al-Zoubi, Majed Abu Jaber, Mamoun Al-Dmour, Bashar Hammad, "A New Approach for Delivering eLearning Courses in Jordanian Universities", *Advances in Social Sciences Research Journal*, Vol 4, No 8, pp 1-13, 2017.
13. Llanos Tobarra, Salvador Ros, Rafael Pastor, Roberto Hernández, Manuel Castro, Abdallah Al-Zoubi, **Mamoun Dmour**, Antonio Robles-Gomez, Agustin Caminero, Jesús Cano, "**An Integrated Example of Laboratories as a Service into Learning Management Systems**", *International Journal of Online Engineering (iJOE)*, Vol. 12, No. 9, pp. 32-39, 2016.
14. Tobarra, S. Ros, R. Hernandez, R. Pastor, M. Castro, A. Y. Al-Zoubi, B. Hammad, **M. Dmour**, A. Robles-Gomez, and A. C. Caminero, "**Analysis of Integration of Remote Laboratories for Renewable Energy courses at Jordan Universities**", *IEEE Frontiers in Education Conference Proceedings*, El Paso, Texas, USA, 21-24 October 2015.
15. Tobarra, S. Ros, R. Pastor, R. Hernandez, M. Castro, A. Al-Zoubi, **M. Dmour**, A. Robles-Gomez, A. Caminero and J. Cano, "**Laboratories as a service integrated into learning management systems**", *13th International Conference on Remote Engineering and Virtual Instrumentation (REV)*, Madrid, Spain. , February 2016