# **Dr. Ghayth ALMahadin** (BEng, MSc, PhD)

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## Summary

An articulate Teacher and Research Scientist with a record of peer-reviewed publications and experience in teaching undergraduate and graduate computing and technology programs. Broad academic exposure to emerging areas of machine learning and artificial intelligence, including Smart IoT, Smart Environments and Autonomous, and Intelligent Systems. Established and recognized research profile with extensive refereed research in high-impact journals and through national and international conference presentations. Excellent communication and leadership acumen, with the capability to train, coach, and mentor teams in delivering scientific research projects. Proven success in delivering extramurally funded research programs focusing on machine learning and artificial intelligence for practical applications in different sectors. Completed Teacher Training for Postgraduate Researchers, with a strong commitment to driving excellence and innovation in curriculum design and courses that promote experiential learning and professional skills for students.

## Education and Credentials

**PhD in Artificial Intelligence and Machine Learning (2022)**
*Nottingham Trent University – United Kingdom*
*Thesis: A Machine Learning Approach to Objective Measurement of Tremor Severity in Parkinson's Disease: Clinical and User Perspectives on Wearable Devices*

**MSc in Artificial Intelligence and Cloud and Enterprise Computing (2017)**
Distinction GPA 78.1
*Nottingham Trent University – United Kingdom*
*Dissertation: Investigating a Knowledge-Based Approach to Twitter Analytics: UK Immigration as a Case Study*

**B.S. in Computer Engineering (2005)**
Good - GPA 71.8
*Mutah University – Jordan*

## Experience Highlights

- **Mutah University , Karak Jordan**
  ***Assistant Professor,*** *10/2024 – to present*

- **Al-Ahliyya Amman University, Amman, Jordan**
  ***Assistant Professor****, 10/2022 – 8/2024*
  Teaching, conducting research and publishing its results, advising undergraduate and graduatestudents, and providing public, departmental, college, and university service.

- **Expert systems with applications**
  **Reviewer** *May 2023 – to present.*

- **Journal of Clinical Images and Medical Case Reports**
  **Editorial Member** *July 2023 – to present*

- **Nottingham Trent University, Nottingham, UK**

  ***Hourly Paid Lecturer (Computing and Technology)**, 1/2020 to 3/2021*

  Taught core courses in the University's undergraduate and graduate computing and technology programs, including supervising students' theses and dissertations.

- **Nottingham Trent University, Nottingham, UK**

  ***Assistant Invigilator**, 7/2018 to 3/2021*

  Supported the organization of examination sessions in the presence of candidates, understanding andapplying detailed written instructions while maintaining accuracy and attention to detail.

- **General Pension and Social Security Authority, Abu Dhabi, UAE**

  ***System Engineer**, 7/2014 to 8/2015*

  Managed preparation of technical documents, product testing, and fault finding and rectification to driveproject delivery and implementation of emerging technologies in the R&D evaluation process, working with Technical Managers, key stakeholders, and suppliers.

- **Injazat Data Systems, Abu Dhabi, UAE**

  ***Systems Administrator**, 11/2007 to 6/2014*

  Administered infrastructure review/implementation, as well as design and development of support andarchitectural documentation, standards, policies, analysis and testing of various systems.

- **Jordan Media City (JMC), Amman, Jordan**

  ***Transmission Engineer**, 12/2005 to 11/2007*

- **Computer and Engineering Bureau, Amman, Jordan**

  ***Technical Support Engineer**, 2/2005 to 11/2005*

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## Publications

1. Jawwad, A.K.A., Turab, N., **Al-Mahadin, G.**, Owida, H.A. and Al-Nabulsi, J., 2024. **A perspective on smart universities as being downsized smart cities: a technological view of internet of thing and big data**. Indonesian Journal of Electrical Engineering and Computer Science, 35(2), pp.1162-1170.
2. **ALMahadin, G**. et al. (2024) '**Automated detection of kidney masses lesions using a deep learning approach**', IAES International Journal of Artificial Intelligence (IJ-AI), 13(3), p. 2862. doi:10.11591/ijai.v13.i3.pp2862-2869.
3. Abu Owida, H., **AlMahadin, G**., Al-Nabulsi, J.I., Turab, N., Abuowaida, S. and Alshdaifat, N., 2024. **Automated classification of brain tumor-based magnetic resonance imaging using deep learning approach**. International Journal of Electrical & Computer Engineering (2088-8708), 14(3).
4. **ALMahadin, G.**, Shabaz, M., Khan, I.R., Vimal, V., Keshta, I. and Maguluri, L.P., 2024. **Content-aware recommendation system for integrated temporal semantic review text over web of things**. Service Oriented Computing and Applications, pp.1-15.
5. Deepa, R., **ALMahadin, G**. and Sivasamy, A., 2024. **Early detection of skin cancer using AI: Deciphering dermatology images for melanoma detection**. AIP Advances, 14(4).
6. Almahadeen, L., **ALMahadin, G.,** Santosh, K., Aarif, M., Deb, P., Syamala, M., & Bala, B. (2024). **Enhancing Threat Detection in Financial Cyber Security Through Auto Encoder-MLP Hybrid Models**. International Journal of Advanced Computer Science and Applications(IJACSA), 15(4).
7. Deepa, R., **ALMahadin, G**., & Sivasamy, A. (2024). **Early detection of skin cancer using AI: Deciphering dermatology images for melanoma detection**. AIP Advances, 14(4).

8. Naeem, A. B., Senapati, B., **Mahadin, G. A**., Ghulaxe, V., Almeida, F., Sudman, S. I., & Ghafoor, M. I. (2024). **Determine the Prevalence of Hepatitis B and C During Pregnancy by Using Machine Learning Algorithm**. International Journal of Intelligent Systems and Applications in Engineering, 12(13s), 744-751.
9. **Almahadin, G**., Subburaj, M., Hiari, M., Sathasivam Singaram, S., Kolla, B. P., Dadheech, P., & Sengan, S. (2024). **Enhancing Video Anomaly Detection Using Spatio-Temporal Autoencoders and Convolutional LSTM Networks**. SN Computer Science, 5(1), 190.
10. **ALMahadin, G**., Sawant, P. D., Ali, S., Anjum, A., Ibrahim, S. K., & Naser, S. J. (2023, December). **Enabling Smart Banking AI and IoT: Challenges and Opportunities**. In 2023 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES) (pp. 1-6). IEEE.
11. **ALMahadin, G.,** Aoudni, Y., Shabaz, M., Agrawal, A.V., Yasmin, G., Alomari, E.S., Al-Khafaji, H.M.R., Dansana, D. and Maaliw, R.R., 2023. **VANET Network Traffic Anomaly Detection Using GRU-BasedDeep Learning Model**. IEEE Transactions on Consumer Electronics.
12. Layth, A.M., **AlMahadin, G**. and Al-Shamayleh, A.S., 2023. **Cold Start Reduction Using Residual NeuralNetworks in Recommender Systems**. Migration Letters, 20(S6), pp.499-508.
13. **ALMahadin, G.** ., Hiari, M. O. ., Hussein, A. H. ., Turab, N. M. M. ., Alkhresheh, A. ., & Al-Tarawneh, M. A.B. . (2022). **Performance Evaluation of an Intelligent and Optimized Machine Learning Frameworkfor Attack Detection.** International Journal of Communication Networks and Information Security (IJCNIS), 14(3), 358–371.
14. **AlMahadin, G.,** Lotfi, A., Carthy, M.M. and Breedon, P., 2022. **Enhanced Parkinson's Disease Tremor Severity Classification by Combining Signal Processing with Resampling Techniques.** SN ComputerScience, 3(1), pp.1-21.
15. **AlMahadin, G**., Lotfi, A., Carthy, M.M. and Breedon, P., 2021. **Task-Oriented Intelligent Solution to Measure Parkinson's Disease Tremor Severity**. Journal of Healthcare Engineering, 2021.c
16. **AlMahadin, G.,** Lotfi, A., Carthy, M.M. and Breedon, P., 2021, December. **Parkinson's Disease Tremor Severity Classification-A Comparison Between ON and OFF Medication State**. In International Conference on Innovative Techniques and Applications of Artificial Intelligence (pp. 364-370). Springer,Cham.
17. **AlMahadin, G.,** Lotfi, A., Zysk, E., Siena, F.L., Carthy, M.M. and Breedon, P., 2020. **Parkinson's disease:Current assessment methods and wearable devices for evaluation of movement disorder motor symptoms-A patient and healthcare professional perspective**. BMC Neurology, 20(1), pp.1-13.
18. AlMahadin, G., Lotfi, A., Carthy, M. M., and Breedon, P. 2019. **Objective measurement of tremorsymptoms in Parkinson's disease remotely and within a clinic.** [Poster and Presentation]. Smart Industry Workshop: Recent Advances in Industrial Digitalisation, Robotics and Automation, 9-11 January2020, Nottingham Trent University.

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## Courses Taught

Data Engineering | Natural Language Processing | Object Oriented Programming

Data Structures | Python | Programming Languages Design | Machine Learning

Deep Learning | Computer Skills | Introduction to Information Technology

## Graduate Student Supervision

- Ayeh Ali Alkhdour : Features Selection & Ensemble Learning 2024 – to Present
- Iman Ahmad al-Jaloudi : Reducing counterfeiting in the real estate market using Enhanced hybrid BC 2024 – to Present>

## Scholarships & Endorsements

- PhD studentship from Nottingham Trent University
- MSc School of Science and Technology Scholarship from Nottingham Trent University
- Student representative on Nottingham Trent University website
- One of the tope20 Excellent Performance at Injazat Data Systems
- Two Personal Performance at Injazat Data Systems
- Completed Teacher Training for Postgraduate Researchers

## Professional Development

- Teacher Training for Postgraduate Researchers | ITIL V3 Foundation | ITIL Release, Control and Validation (RC & V) | VNX Unified Storage Deployment and Management | EMC Networker 8.0 Installation, Configuration & Administration | NetBackup 7.5 for Windows Administration | VMware 3.5 (Install, Configure, Manage) | VMware vSphere V4 (Install, Configure, Manage) | VMware vSphere V5 (Install, Configure, Manage) | SCOM System Center Operations (Manager 2007) | SCCM (System Center Configuration Manager 2007) | Windows 2012 networking | Computer Maintenance | C++ | CCNA | A+ | Customer Expectations need Professional | Business Communication Course | Intensive English Language Course

## Teaching Skills

- Apply reflective strategies to support development as an academic practitioner. Identify a range of active and inclusive learning approaches in diverse learning spaces.Demonstrate a range of feedback approaches to support students' learning.
- Explain the pedagogic principles underpinning grade-based assessment.Identify potential barriers to learning and solutions to address them.
- Apply different teaching approaches to foster learner engagement. Design learning outcomes and plan diverse activities for your sessions.

## Technical Proficiency

- Signal Processing | Pattern recognition | Sensing Technology | Natural language processing and sentiment analysis | Applying Machine Learning Libraries & Algorithms | Programming by Python, Java and C++ languages | LaTex | Active directory 2003,2008 R2 | Windows Servers OS (2003, 2008, 2012) | Backup software (EMC Networker, Brightstore and HP Data protector) | HP Openview, LANDesk, CAUnicenter administrator | Blackberry server BES versions 4.0 and 5.0 and as well Blackberry devices | Enterprise Vault 10.x, 11.x Symantec Archiving solution | Microsoft Certificate Authority (Install,configure and Manage) | Bluecoat proxy SG and AV | McAfee ESET antivirus Server and Client | IronPort | Totemo mail encryption | Storage: EMC Storage Clarion and VNX and IBM Storwize V7000 | Projectmanagement | Disk-imaging software like Norton Ghost and Acronis Power Quest Drive Image | Managing exchange server 2003, 2007 and 2010