

Irbid - Jordan

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Yazan . A . AL - Khassawneh

18-April-1982

Profile

I am a dedicated Computer Scientist with a Ph.D. in Computer Science, specializing in Artificial Intelligence and Data Mining. My research spans various facets of computer science, including Big Data analytics, Information Retrieval & Extraction, and Graph Theory, with expertise in Sub-Graph Approaches and Semantic Similarity Measurements.

With seven years of teaching experience and a track record of mentoring student groups in AI-related projects, I am passionate about nurturing the next generation of computer scientists. I've actively contributed to AI ethics and policy development as a Member of the consultant committee responsible for preparing the National Charter of Ethics for Artificial Intelligence. Additionally, as a Founding Member of the Artificial Intelligence and Entrepreneurship Association, I've been instrumental in promoting AI-driven entrepreneurship and innovation. I've shared insights internationally as a keynote speaker and have a strong publication record, including high-impact factor journals and three copyrights. My commitment lies in pushing the boundaries of technology, mentoring future talent, and actively shaping the ethical governance of Artificial Intelligence.

Research interests

- Artificial Intelligence.
- Data Science.
- Big Data.
- Data mining & Knowledge Discovery.
- Text Mining.
- Information Retrieval & Extraction.
- Graph Theory.
- Cyber Security.

Education

- 2017 UTM – Malaysia (**World Rank # 203 QS, 2023**)
- PhD degree in Computer Science (Faculty of Computing)
Specialization: **Artificial Intelligence / Data Mining & Big Data**
Thesis Title: Sub-Graph Approach Based on Hybrid and Semantic Similarity Measurements for Single Document Extractive Summarization.
Supervisor: Prof. Dr. Naomie Salim.
- 2011 UKM – Malaysia (**World Rank # 129 QS, 2023**)
- Master degree in Computer Science (Faculty of Information Science and Technology, FTSM)
Specialization: **Data Mining (Association Rules Mining / Graph Mining)**
Thesis Title: Graph based association rules mining using triangle counting approach.
Supervisor: Prof. Dr. Azuraliza Abu Bakar.
- 2004 Yarmouk University – Irbid, Jordan
- Bachelor degree in Computer Science (Faculty of Information Technology and Computer Science).

- **Al-Isra University (Amman – Jordan)**

Assistant Professor (Computer Science Department) from September, 25, 2023 – Now.

Experience

- **Zarqa Private University (Zarqa – Jordan)**

Assistant Professor (Data Science and Artificial Intelligence Department) from December, 16, 2019 – September, 23, 2023.

Assistant Professor (Computer Science Department) from October, 30, 2017 – December, 15, 2019.

- **University Technology Malaysia (UTM)**

Teaching Assistant from September 2013 – June 2014

- **Tiberias Cultural Center (Irbid – Jordan)**

ICDL trainer from 2005 to 2008

- **Ibn Taymeah Primary School**

Science and Computer Science teacher from February 2006 to June 2006.

- **Hamad Al-Farhan Secondary School**

Computer Science Teacher from February 2009 till June 2009.

Teaching Courses

1. Data Mining and Warehousing
2. Research Methodology and Ethics
3. E-Business
4. Information Retrieval

5. System Analysis
6. Computer Information System
7. Digital Logic Design
8. Computer Organization and Architecture
9. Introduction to Artificial Intelligence
10. Digital Image Processing
11. Artificial Intelligence Programming (Python Programming)
12. Computer and Internet Applications
13. Cognitive Science
14. Fuzzy Logic
15. Web Security
16. Information Security Risk Management
17. Computer Networks
18. Information Security Protocols
19. Database and Oracle
20. Object Oriented Programming (JAVA)

Research Group

1. Data Mining and Optimization DMO (FTSM – UKM – Malaysia)
2. Soft Computing Research Group SCRG, (FC – UTM - Malaysia)

Workshops

1. Arduino Workshop. Zarqa University, Jordan, 15 February – 10 March 2022.
2. International Workshop on Big Data Analytics 2015 'Multi Strategy Learning Analytics for Big Data'. University Technology Malaysia, Kuala Lumpur, 17 – 18 August 2015.
3. Big Data Analytic Talk using OSI Platform. University Technology Malaysia, Johor Bahru, 10 June 2015.
4. Three Minutes Thesis (3MT) Competition 2015. University Technology Malaysia, Johor Bahru, 25 February 2015. (The result was 4th out of 13 participants).
5. Introduction to NeuraBASE Toolbox. Neuramatix Training Centre. Mid Vally City, Kuala Lumpur, Malaysia, 26 September 2014.
6. Soft Computing Seminar (SOCOS 2014). University Technology Malaysia, Johor Bahru, 25 – 25 June 2014.
7. Proposal Defense and VIVA Voce. University Technology Malaysia, Johor Bahru, 5 March 2014.
8. TURN-IT-IN. University Technology Malaysia, Johor Bahru, 27 February 2014.
9. 9th Postgraduate Annual Research Seminar (PARS). University Technology Malaysia, Johor Bahru. 24 – 26 September 2013.

Academic Activities

10. Soft Computing Seminar (SOCOS 2013). Glory Beach Resort, Port Dickson, Malaysia, 28 – 30 May 2013.
11. 8th Postgraduate Annual Research Seminar (PARS). University Technology Malaysia, Johor Bahru, 27 – 29 November 2012.
1. **Visiting Professor** through **ERASMUS +** program to RUSE University, Bulgaria 5 -13 May, 2022.
2. Keynote speaker at the twelfth virtual scientific Webinar organized by IEEE Yemen Subsection. In cooperation with college of Engineering and information technology Al-Arab University, Mukalla, Yemen. Online workshop under the title of **“The Artificial Intelligence Ethics: Issues and Initiatives (AIEII)”**. 25 – December – 2022.
3. Keynote speaker at the fourth virtual scientific Webinar organized by IEEE Yemen Subsection. In cooperation with college of Engineering and information technology -AlArab University, Mukalla, Yemen. Online workshop under the title of **“Artificial Intelligence: The Industrial Revolution and Digital Transformation”**. 29 – September – 2020.
4. Keynote speaker at Hadramout University collaborating with Academic Development Center and Quality Assurance. Online workshop under the title of **“Tips and Guidelines to write a good research paper”**. 23 – September – 2020.
5. Keynote speaker at Hadramout University collaborating with Academic Development Center and Quality Assurance. Online workshop under the title of **“Scientific Research: Methods, Tools, and Ethics”**. 17 – October – 2020.
6. Member of the Student Activities and Community Service Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2021-2022.
7. Chairman of the Academic Activities Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2020-2021.
8. College council member – Representative of the Department of Artificial Intelligence. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2020- 2021.
9. College council member – Representative of the Department

of Artificial Intelligence. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2021- 2022.

10. Chairman of the Academic Activities Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2019-2020.
11. Member of the Students Activities Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2020-2021.
12. Member of the Students Activities Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2019-2020.
13. Member of the Academic Activities Committee. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2018-2019.
14. Vice chairman of the Employment and Scientific day event. Faculty of Information Technology, Zarqa University, Zarqa, Jordan, 2019-2020.
15. General Secretary of Postgraduate Student Society (PGSS). Faculty of Computing, University Technology Malaysia, Johor Bahru, 2012 – 2013.
16. General Secretary of Postgraduate Student Society (PGSS). Faculty of Computing, University Technology Malaysia, Johor Bahru, 2013 – 2014.
17. Chairman in the 9th Postgraduate Annual Research Seminar (PARS). University Technology Malaysia, Johor Bahru. 24 – 26 September 2013.
18. Committee Member in the Three Minute Thesis (3MT) Competition. University Technology Malaysia, Johor Bahru, 19 March 2014.
 - Peer Review Activities
 - Reviewer in PLOS ONE Journal, since 2017. (Q1, Journal)
 - Reviewer in IRICT (International Conference of Reliable Information and Communication Technology).
 - Reviewer in ACIT (International Arab Conference on Information Technology).
 - Reviewer in IAJIT Journal (The International Arab Journal of Information Technology).

Editorial Activities

Attended Training Courses

- October 2003 Yarmouk University Irbid, Jordan
Certified for CCNA 1 Networking basics

Learned most of the Networking basics, such as IP addresses, LANs, TCP/IP and OSI Model and much more about networks and internet.

- February 2004 Yarmouk University Irbid, Jordan

Certified for CCNA 2 Routers and Routing basics

Got professional experience in routing protocols, and Networks Operating System command set.

- April 2004 Yarmouk University Irbid, Jordan

Certified for CCNA 3 Switching Basics and Intermediate Routing

Got professional experience in VLANs, IGRP, and IPX.

- July 2004 Yarmouk University Irbid, Jordan

Certified for CCNA 4 WAN Technologies

Got professional experience in WAN Technologies.

- Feb 2004 Yarmouk University Irbid, Jordan

Copyrights

1. **Yazan Alaya Al-Khassawneh** and Prof Dr Naomie Salim. Algorithms to Find Triangles in the Graph as a Sub-Graph. Copyright, University Technology Malaysia, 2015.
2. **Yazan Alaya Al-Khassawneh** and Prof Dr Naomie Salim. Representing Text as Graph Algorithms. Copyright, University Technology Malaysia, 2015
3. **Yazan Alaya Al-Khassawneh** and Prof Dr Naomie Salim. Graph – Based Extractive Text Summarization using Reduction Techniques. Copyright, University Technology Malaysia, 2015

Publications

1. Al-Milli, N. R., & **Al-Khassawneh, Y. A.** (2024). Intrusion Detection System using CNNs and GANs. *WSEAS Transactions on Computer Research*, 12, 281-290. (**SCOPUS Q4, Indexed**).
2. Hamadneh, T.; Hioual, A.; Alsayyed, O.; **Al-Khassawneh, Y.A.**; Al-Husban, A.; Ouannas, A. The FitzHugh–Nagumo Model Described by Fractional Difference Equations: Stability and Numerical Simulation. *Axioms* **2023**, *12*, 806. <https://doi.org/10.3390/axioms12090806>. (**SCOPUS Q1, and WOS Indexed, Impact Factor 2**).
3. Hamadneh, T.; Hioual, A.; Alsayyed, O.; **AL-Khassawneh, Y.A.**; Al-Husban, A.; Ouannas, A. Finite Time Stability Results

for Neural Networks Described by Variable-Order Fractional Difference Equations. *Fractal Fract.* 2023, 7, 616. <https://doi.org/10.3390/fractalfract7080616>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 5.4).**

4. Hamadneh, T.; Chebana, Z.; Abu Falahah, I.; **AL-Khassawneh, Y.A.**; Al-Husban, A.; Oussaeif, T.-E.; Ouannas, A.; Abbes, A. On Finite-Time Blow-Up Problem for Nonlinear Fractional Reaction Diffusion Equation: Analytical Results and Numerical Simulations. *Fractal Fract.* 2023, 7, 589. <https://doi.org/10.3390/fractalfract7080589>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 5.4).**
5. Hamadneh, T.; Hioual, A.; Alsayed, O.; **AL-Khassawneh, Y.A.**; Al-Husban, A.; Ouannas, A. Local Stability, Global Stability, and Simulations in Fractional Discrete Glycolysis Reaction–Diffusion Model. *Fractal Fract.* 2023, 7, 587. <https://doi.org/10.3390/fractalfract7080587>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 5.4).**
6. Abu Falahah, I.; Hioual, A.; Al-Qadri, M.O.; **AL-Khassawneh, Y.A.**; Al-Husban, A.; Hamadneh, T.; Ouannas, A. Synchronization of Fractional Partial Difference Equations via Linear Methods. *Axioms* 2023, 12, 728. <https://doi.org/10.3390/axioms12080728>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 2).**
7. Hamadneh, T.; Abbes, A.; Abu Falahah, I.; **AL-Khassawneh, Y.A.**; Heilat, A.S.; Al-Husban, A.; Ouannas, A. Complexity and Chaos Analysis for Two-Dimensional Discrete-Time Predator–Prey Leslie–Gower Model with Fractional Orders. *Axioms* 2023, 12, 561. <https://doi.org/10.3390/axioms12060561>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 2).**
8. Hamadneh, T.; Abu Falahah, I.; **AL-Khassawneh, Y.A.**; Al-Husban, A.; Wanas, A.K.; Bulboacă, T. Initial Coefficients Upper Bounds for Certain Subclasses of Bi- Prestarlike Functions. *Axioms* 2023, 12, 453. <https://doi.org/10.3390/axioms12050453>. **(SCOPUS Q1, and WOS Indexed, Impact Factor 2).**
9. **AL-Khassawneh, Y.A.**; Hanandeh, E.S. Extractive Arabic Text Summarization-Graph-Based Approach. *Electronics* 2023, 12,

437. <https://doi.org/10.3390/electronics12020437>. (**SCOPUS Q2, and WOS Indexed, Impact Factor 2.9**).

10. **Al-Khassawneh, Yazan**. "A Review of Artificial Intelligence in Security and Privacy: Research Advances, Applications, Opportunities, and Challenges." *Indonesian Journal of Science and Technology* [Online], 8.1 (2023): 79-96. Web. 16 Jan. 2023. (**SCOPUS Q1, Indexed**).
11. **Yazan Alaya AL-Khassawneh**. (2020). The use of Semantic Role Labelling with Triangle-Graph Based Text Summarization. *International Journal of Emerging Trends in Engineering Research*, 8(4), 1162-1169. (**SCOPUS Indexed**).
12. **AL-Khassawneh, Y. A.**, Salim, N., & Jarrah, M. (2017). Improving Triangle-Graph Based Text Summarization using Hybrid Similarity Function. *Indian Journal of Science and Technology*, 10(8). (**WOS, ISI Indexed**).
13. **AL-Khassawneh, Y. A.**, Salim, N., & Obasae, A. I. (2016). Sentence Similarity Techniques for Automatic Text Summarization. *Journal of Soft Computing and Decision Support Systems*, 3(3), 35-41.
14. **Y. A. Al-Khassawneh**, "An investigation of the Intrusion detection system for the NSL-KDD dataset using machine-learning algorithms," *2023 IEEE International Conference on Electro Information Technology (eIT)*, Romeoville, IL, USA, 2023, pp. 518-523, doi: 10.1109/eIT57321.2023.10187360.
15. **AL-Khassawneh, Y.A.**, Hanandeh, E.S., Almatarneh, S. (2023). Extractive Text Summarization Using Syntactic Sub-graph Models. In: Wah, Y.B., Berry, M.W., Mohamed, A., Al-Jumeily, D. (eds) *Data Science and Emerging Technologies. DaSET 2022. Lecture Notes on Data Engineering and Communications Technologies*, vol 165. Springer, Singapore. https://doi.org/10.1007/978-981-99-0741-0_1
16. Aljaidi, M., Alsarhan, A., Samara, G., **AL-Khassawneh, Y. A.**, Al-Gumaei, Y. A., Aljawawdeh, H., & Alqammaz, A. (2023). A Critical Evaluation of A Recent Cybersecurity Attack on iTunes Software Updater. In *2022 International Engineering Conference on Electrical, Energy, and Artificial Intelligence (EICEEAI)* [10050464]

IEEE. <https://doi.org/10.1109/eiceeai56378.2022.10050464>

17. E. S. Hanandeh, A. Abu Awwad and **Y. Khassawneh**, "Classify Arabic Text using Vector Space Models," *2021 22nd International Arab Conference on Information Technology (ACIT)*, 2021, pp. 1-12, doi: 10.1109/ACIT53391.2021.9677134.
18. S. Almatarneh, P. Gamallo, B. ALshargabi, **Y. Al-Khassawneh** and R. Alzubi, "Comparing Traditional Machine Learning Methods for COVID-19 Fake News," *2021 22nd International Arab Conference on Information Technology (ACIT)*, 2021, pp. 1-4, doi: 10.1109/ACIT53391.2021.9677453.
19. **Yazan Alaya Al-Khassawneh**, Naomie Salim, Mutasem Jarrah. "Features Effect On Triangle Graph Approach For Extractive Text Summarization: Hybrid Model" (2016). 2nd International Congress On Technology - Engineering & Science. Kuala Lumpur, Malaysia, 28th -29th July 2016.
20. Obasa, A. I., Salim, N., & **Al-Khassawneh, Y. A.** (2014). A Survey Of Challenges And Resolutions Of Mining Question-Answer Pairs From Internet Forum. *Jurnal Teknologi* 71(5):103-109. (**SCOPUS indexed**)
21. Obasa, A. I., Salim, N., & **Al-Khassawneh, Y. A.** Mining Of Answers From Web Forum: Lexical Versus Non-lexical Approaches. *Academic Journal of Science*. 3(3) pp 243–251, 2014.
22. **Yazan A. Al-Khassawneh**, Naomie Salim, Isiaki A. Obasa, "Graph-based Extractive Text Summarization Based on Triangle Counting Approach" (2014). The International Conference for Academic Disciplines in Rome: 28th – 31thOctober 2014.
23. **Yazan A. Al-Khassawneh**, Naomie Salim, Isiaka A. Obasa (2014). "Extractive Text Summarization Using Graph Triangle Counting Approach: Proposed Method." 1st International Conference of Trends in Information and Communication Technologies: Universiti Teknologi Malaysia :12th - 14thSeptember 2014

24. Isiaka A. Obasa, Naomie Salim and **Yazan Al-Khassaweh** "Mining Question – Answer Pairs from Web Forum : A Survey of Challenges and Resolution" (2014). 5th Annual Conference International Graduate Conference on Engineering, Science and Humanities 2014: Universiti Teknologi Malaysia: 19th– 21th August 2014.
25. Isiaka A. Obasa, Naomie Salim and **Yazan A. Al-Khassaweh** "Mining of Answer from web forum: lexical versus non-lexical approaches" (2014). The International Journal Arts and Sciences' (IJAS) International Conference for Academic Disciplines in Rome :28th – 31th October 2014.
26. **Yazan Al-khassawneh** and Naomie Salim. (2012). On the Use of Data Mining Techniques in Vehicular ad Hoc Network. The International Conference on Advanced Machine Learning Technologies and Applications (AMLT12), the Cairo University, Cairo, Egypt during Dec. 8-10, 2012. (**Indexed by IE & SCOPUS**).
27. **Al-Khassawneh. Y.A.J**, Bakar, A.A, Zainudin, S. "Triangle Counting Approach for graph-based Association Rules Mining", Fuzzy Systems and Knowledge Discovery (FSKD), 2012 9th International Conference on 29-31 May 2012, pp, 661-665, Sichuan, China.

Supervision

1. Supervisor for one team in SUMO ROBOTS Competition held in AlHussein Technical University, Amman, Jordan 15-16 July, 2023.
2. Supervisor for one team in SUMO ROBOTS Competition held in AlHussein Technical University, Amman, Jordan 27-28 May, 2022.
3. Supervised many groups of students in their graduation projects in Bachelor degree in different domains, 2017-2022.

Others

1. Founding member of the Artificial Intelligence and Entrepreneurship Association / Jordan, 2021.
2. Founding member of East Lights Tourism Association / Jordan, 2024.

Future Works and Research Directions

As a dedicated researcher and computer scientist, I remain committed to advancing the fields of Artificial Intelligence, Data Mining, and Big Data. In the coming years, I plan to focus on the following areas of research and professional development:

1. **Advanced Data Mining Techniques:** I aim to explore and develop advanced data mining algorithms that can efficiently extract valuable insights from large and complex datasets. This includes research into novel association rule mining methods, graph-based analysis, and deep learning approaches.
2. **AI Ethics and Responsible AI:** Given the growing importance of ethical considerations in AI, I intend to contribute to discussions and initiatives related to AI ethics and responsible AI adoption. This includes research on bias mitigation, transparency, and ethical frameworks for AI systems.
3. **Interdisciplinary Collaboration:** I recognize the power of interdisciplinary collaboration. In the future, I plan to collaborate with experts from diverse fields to address complex real-world challenges using AI and data-driven approaches.
4. **Mentoring the Next Generation:** Building on my experience as a professor and mentor, I aspire to continue nurturing and guiding the next generation of data scientists and AI researchers. This includes supervising graduate students and supporting their research endeavors.
5. **International Outreach:** To promote global knowledge sharing, I will continue to participate in international workshops, conferences, and collaborative projects. This includes delivering keynote speeches and engaging with international organizations to foster AI advancements.
6. **Innovation and Entrepreneurship:** As a founding member of the Artificial Intelligence and Entrepreneurship Association, I am committed to fostering innovation and entrepreneurship in the AI domain. I plan to continue organizing events and initiatives that encourage AI-driven startups and solutions.
7. **Contributions to AI Policy:** My experience with the committee for preparing the National Charter of Ethics for Artificial Intelligence has ignited my interest in shaping AI policies. I will

actively participate in discussions and contribute to the formulation of AI regulations and guidelines.

These future research endeavors and directions underscore my unceasing commitment to the continuous evolution of computer science and artificial intelligence knowledge. I am deeply enthusiastic about the exciting opportunities that await on the horizon. These prospective ventures include further exploration into cutting-edge AI technologies, the investigation of novel data mining techniques, and the pursuit of innovative solutions in the realm of Big Data analytics. My aspiration is to not only expand the boundaries of knowledge but also to contribute valuable insights and solutions to the academic and professional communities.

I look forward to collaborating with fellow researchers and thought leaders to tackle pressing challenges in the field. This includes endeavors like developing ethical AI frameworks, enhancing machine learning algorithms for real-world applications, and fostering interdisciplinary research that can drive the next wave of AI innovation. As I embark on this journey, my goal is to make a meaningful and lasting impact, leveraging my expertise and passion to shape the future of computer science and artificial intelligence.

References

Upon request.