

# A'aeshah Alhakamy, Ph.D.

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🌐 A'aeshah Alhakamy



## Education

- 2017-2020 📖 **Ph.D., in Computer Science.** *Purdue University*, Indianapolis, USA.  
Thesis title: *Extraction and Integration of Physical Illumination in Dynamic Augmented Reality Environments.* 🔗 <https://doi.org/10.25394/PGS.12950315.v1>
- 2015-2016 📖 **M.Sc., in Computer Science.** *Purdue University*, Indianapolis, USA.
- 2001-2005 📖 **B.Sc., in Computer Science.** *Taibah University*, Medina, Saudi Arabia.


## Appointments

- Sep 2023 - Present 📖 **Vice Chair of the Standing Executive Committee for Data Management and Governance at the University of Tabuk.**
- Aug 2023 - Present 📖 **Data Management Officer at the University of Tabuk.**  
- Preparing, implementing, and following up data management programs in various fields. - Ensure compliance with national data management controls and specifications. - Communicate with business data representatives and specialists. - Oversee data quality and accuracy. - Preparing, implementing, and following up data quality improvement programs. - Overseeing data structure and modeling. - Oversee business intelligence and analytics initiatives. - Prepare and implement open data initiatives. - Manage data-sharing requests. - Manage requests for access to information. - Supervision of the data dictionary.
- Jun 2023 - Dec 2023 📖 **Erasmus+ Liaison Officer at the University of Tabuk.**  
Communicate with Erasmus+ Programme representatives and specialists at the Ministry of education, Erasmus+ is an European funding programme established in 1987 offering university students the possibility of studying or register in an internship abroad.
- May 2023 - Present 📖 **Member of the Computer Science Department Council.**
- May 2021 - May 2023 📖 **Member of the Information Technology Department Council.**  
- Propose the appointment of faculty members, graduate students, and lecturers and propose their secondment, delegation and promotion. - Propose degree plans, or their amendment in consideration with academic departments. - Propose curricula, textbooks, and references for the department of the college or institute. - Encourage the conduct of academic research, coordinate research activities between the departments of the university or institute, and undertake its publication.
- Jan 2023 - Present 📖 **Researcher at the Artificial Intelligence and Sensing Technologies (AIST) Center at the University of Tabuk.**  
PI: Extended Reality (XR) Making Immersive Technologies in Training and Repair: The Key to Unlocking Industry 4.0. Grant number: S-1443-0002, Amount: 24,800 SAR. - Conduct scientific research in the field of Artificial Intelligence and Sensing Technology - Work on internal and external funded research.

## Appointments (continued)

























Dec 2022 - Present	<p>■ <b>Member of the Permanent Committee Supervising Social Responsibility Activities at the University of Tabuk.</b></p> <p>- Participate in making and approving decisions related to the system and policies of the unit and community initiatives. Participate in the presentation and development of qualitative community initiatives. - Review the measurement of performance indicators. - Participate in planning and preparing programs for the Community Responsibility Unit.</p>
Apr 2021 - Present	<p>■ <b>Assistant Professor of Computer Science at the Faculty of Computers and Information Technology of the University of Tabuk.</b></p> <p>- Conduct research and publish papers in academic journals. - Representing the university at conferences and presenting presentations when necessary. - Teaching and supervising undergraduate and graduate students. - Provide demonstrations and supervise experiments and investigations. - Answering questions in class or via email or telephone. - Provide Professors and Department Heads with feedback on student progress. - Write proposals to secure funding for research.</p>
Jan 2023 - Aug 2023	<p>■ <b>Supervisor of Academic Affairs at the University of Tabuk.</b></p> <p>- Build course plan for the faculty of Computers and Information Technology</p> <p>- Assistant the supervisor of the Department of Computer Science to perform her duties.</p>
Jan 2022-Present	<p>■ <b>The Saudi Federation For Cybersecurity, Programming and Drones Liaison Officer.</b></p> <p>-Acts as the point of contact between different organizations or within the University of Tabuk for all cybersecurity, programming, and drones. -Coordinating cybersecurity programming, and drone initiatives, ensuring compliance with security policies, facilitating communication between departments or organizations, and managing responses to cybersecurity incidents.</p>
Jan 2021 - Jan 2023	<p>■ <b>Deputy Director of Industrial Innovation and Robotics Center (IIRC) at the University of Tabuk.</b></p> <p>- Build a strategic plan for the research center - Conduct research in the field of robotics and industrial innovations - Coordination of visits by external parties to the center - Finding aspects of partnership and research cooperation with external parties.</p>
Fall 2018- Fall 2020	<p>■ <b>Research Assistant at Indiana University @Indianapolis.</b></p> <p>Working at the Data Lab with an NSF-funded project named "Aiding Reasoning about Correlation and Causation". Develop a Human-Data and Embodied Interaction system using gestures, body movements, Gamepad, or Tangible objects.</p>
Fall 2017	<p>■ <b>Teaching Assistant at Purdue University @Indianapolis.</b></p> <p>Held office hours for individual student discussion and grading exams and papers for the security engineering course.</p>
Dec 2009 - Apr 2021	<p>■ <b>Teaching Assistant of Computer Science at the Faculty of Computers and Information Technology of the University of Tabuk.</b></p> <p>Teaching computer organization with assembly, data structure and algorithms, operating system, theory of computation, programming language, logic design, advanced Internet and web technology, computer ethics, introduction to computing, computer programming 1 &amp; 2</p>
2008	<p>■ <b>Computer Instructor at Modern Girl Institute for Computer and Languages and at several High Schools.</b></p> <p>Taught Introduction to Computer Science, System Analysis and Design, Speed typing, Microsoft Office, Adobe Photoshop and more.</p>

## Appointments (continued)


- 2007  **Secretary at Taibah Charity Association in Madina**  
Administrative duties: conference and meeting setting, travel planning, letter writing, report forms brochures, cards, and customer service.

## Achievements





### Awards

- 2024  **Excellence Award**, in the field of teaching and learning, the path of excellence in e-learning (National Excellence), University of Tabuk Excellence Award in its first distinguished session 1445 AH - 2024 AD.  Post
-  **Outstanding Faculty Member Award**, in Student Activities, Deanship of Student Affairs, University of Tabuk  Post
-  **Outstanding Scientific Research Award**, Web of Science Journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <https://doi.org/10.1007/s11042-023-17598-7>
-  **Outstanding Scientific Research Award**, Web of Science Journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <https://doi.org/10.3390/s23136024>
- 2023  **Outstanding Scientific Research Award**, Web of Science Journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <https://doi.org/10.3390/sym15030699>
-  **Outstanding Scientific Research Award**, Web of Science Journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <https://doi.org/10.3390/su15020911>
-  **Incentive Reward for Distinguished Researchers**, published with graduate students in Web of Science classified journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <http://dx.doi.org/10.14569/IJACSA.2022.0131246>
- 2022  **President's Award for Outstanding Scientific Research Award**, in research and innovation for scientific and engineering track, University of Tabuk.  Post
- 2021  **Outstanding Scientific Research Award**, Web of Science Q1 Journal, Deanship of Scientific Research, University of Tabuk. For manuscript  <https://doi.org/10.1145/3386496>
- 2020  **Travel Award**, Attend CHI conference from Dr Cafaro, NSF, and IUPUI Data Lab full support.
- 2019  **Outstanding Scientific Research Award**, Publishing while a Ph.D. student from the Saudi Arabian Cultural Mission (SACM). For manuscript  <https://doi.org/10.1109/INFOCT.2019.8710982>
- 2018  **Travel Award**, Financial Fund to attend a conference title "Introduction to Academic Leadership" provided by the Saudi Arabian Cultural Mission (SACM) that includes travel and accommodation.
- 2016  **Master with high GPA Award**, Graduating a Master's degree with a high GPA from the Saudi Arabian Cultural Mission (SACM).
- 2013  **Scholarship**, Full Scholarship from the University of Tabuk and the Saudi Arabian Cultural Mission (SACM).




## Achievements (continued)

- 2005  **Honor Degree**, Graduating with honor degree, BSc in Computer Science from Taibah University.

### Certifications





- Oct 6-8, 2024  **The 6 Critical Practices For Leading A Team: Supervisory Leadership Path** Awarded by Deanship of Quality and Academic Accreditation in cooperation with Franklin Covey.
- June 5, 2023  **Fundamentals of Developing and Building Policies and Legal Legislation** Awarded by the national data management office (NDMO).
- July 24, 2021  **Hadoop Platform and Application Framework**. Awarded by University of California San Diego.
- 2018  **Introduction to Academic Leadership**. Awarded by the Saudi Arabia Ministry of Education.

### Grants




- Aug 2022 - May 2023  **Deanship of Scientific Research, University of Tabuk** Extended Reality (XR) Making Immersive Technologies in Training and Repair: The Key to Unlocking Industry 4.0, Role: PI, Grant#: S-1443-0002.
- Jan 2019 - Dec 2020  **Directorate for Computer & Information Science & Engineering (NSF CISE)** CHS:Eager:Aiding Reasoning about Correlation and Causation, Role: RA, URL:  <https://app.dimensions.ai/details/grant/grant.7706397>, Grant#: 1848898

## Mentoring (Research and Project Advisor)



### Master Students

- July 2022 - July 2023  **Hibah Q. Alatawi, Nouf M. Albalawi, Ghada H. Shahata, and Khulud A. Aljohani**, Thesis titled "Extended Reality (XR) making Immersive Technologies in Training and Repair: The Key to Unlocking Industry 4.0", Published Article "Augmented Reality-Assisted Deep Reinforcement Learning-Based Model towards Industrial Training and Maintenance for NanoDrop Spectrophotometer" on  <http://doi.org/10.3390/s23136024>
- May 2021 - May 2022  **Shoroog Albalawi, Lama Alshahrani, Nouf Albalawi, and Reem Kilabi**, Thesis titled "An Iris Recognition and Authentication System Using Image Analysis and Artificial Intelligence Techniques", Published Article "A Comprehensive Overview on Biometric Authentication Systems using Artificial Intelligence Techniques" on  <http://dx.doi.org/10.14569/IJACSA.2022.0130491>

### Undergraduate Students

- Aug 2024 - Present  **Raghad Alzahrani, Aryaf Almutiri, Raghad Alenzi, Mram Alzahrani, Lama Hamlan**, Capstone project titled "Smart coach"
- Jan 2024 - Present  **Nour Mubarak, Bayader Al-Issa, Maryam Majrashi, Shawq Al-Fihmani, Nada Al-Adisani, Aseel Al-Atwi**, Capstone project titled "YUSR: A Mobile Application for Umra and Hajj in Makkah"
- Aug 2022 - Feb 2023  **Shahad Alsufyani, Alanoud Albalawi, Maha Al-Shammari, Madawi Al-Anzi, Albatul Altoum, Maha Alenazi, and Alia alatawi**, Capstone project titled "Road Breakers"
-  **Heba Al-Balawi, Wejdan Al-Atwi, Batool Abdullah, Wadha Al-Hwaiti, Bayan Al-Atwi, Samah Alhawiti, Maryam Alatwi, and Razan Alatwi**, Capstone project titled "UT Repository"

## Mentoring (Research and Project Advisor) (continued)

- Aug 2021 - May 2022     **Renad Alsharafaa, Manar Albalawi, Awatef Alharthi, Njoud Alhazmi, Amal Aamri, and Razan Asiri**, Capstone project titled "Stay"
-  **Rana Alharbi, Hadeel Aljuhani, Ahad Aljohani, Abeer Albalawi, Ghada Albushi, and Rahaf AlAtwi**, Capstone project titled "Student Club"

## University and Community Services


### Keynote Speaker/Workshops

- 19 Sep 2024     **Technical Podcast - Deanship of Student Affairs**, University of Tabuk, Saudi Arabia, Record an episode about "Digital fraud".
- 28 Jan - 1 Feb 2024     **Professional Center - Deanship of Student Affairs with Research and Consulting Institute**, University of Tabuk, Saudi Arabia, Providing a 40 hours training program entitled "Cybersecurity Course" in cooperation with the King Abdulaziz Charitable Society and King Abdulaziz Model Schools.
- 9 Feb 2023     **Deanship of Scientific Research**, University of Tabuk, Saudi Arabia, A scientific seminar within the research hour initiative, Research entitled "Extended Reality (XR) Toward Building Immersive Solutions: The Key to Unlocking Industry 6.0" for the funded project with grant# S-1443-0002
- 8 Nov 2021     **Faculty of Computers and Information Technology** University of Tabuk, Saudi Arabia, Seminar entitled "Essential steps to create your own website"
- 16 Sep 2021     **Digital Giving Webinar, Ataa**, Seminar entitled "External scholarship and self-education to keep pace with digital transformation"
- 8 Sep 2021     **Faculty of Computers and Information Technology**, University of Tabuk, Saudi Arabia, Seminar entitled "Extraction and Integration of Physical Illumination in Dynamic Augmented Reality Environment"



### Reviewer/Technical Committee

- 11-13 Nov 2024     **The IEEE 2024, 11th International Conference on Control, Mechatronics and Automation (ICCMA 2024)**, will be held at Brunel University London, UK.
- 12-14 Jun 2024     **The ACM International Conference on Interactive Media Experiences (IMX)**, held in Stockholm, Sweden.
- 1-3 Nov 2023     **The IEEE 2023, 11th International Conference on Control, Mechatronics and Automation (ICCMA 2023)**, held at Campus Grimstad, University of Agder, Norway.
- 17 Dec 2022-present     **Multimedia Tools and Applications Journal**, Springer Nature Switzerland AG, Reviewer of 16 scientific manuscripts and keep going
- 18 Apr 2022-present     **International Journal of Human-Computer Interaction**, Taylor & Francis, London, UK, Reviewer of 2 scientific manuscript and keep going
- 13-16 Feb 2022     **The ACM 2022, 16th International Conference on Tangible, Embedded and Embodied Interaction (TEI)**, KAIST, Daejeon, South Korea
- 30 Nov-2 Dec 2021     **The IEEE 2021, 2nd International Conference on Computing and Information Technology (ICCIT)**, at the University of Tabuk, Saudi Arabia

### Ambassador

- 9 Feb 2023     **Future Ambassadors Program at the Ministry of Communications and Information Technology**, Riyadh, Saudi Arabia, Presenting a workshop entitled: "Extended Reality (XR) Toward Building Immersive Solutions: The Key to Unlocking Industry 4.0"


## University and Community Services (continued)

- 12-20 Dec 2022  **Future Ambassadors Program at the Ministry of Communications and Information Technology**, Riyadh, Saudi Arabia, Training an elite group of students in several different universities around the Kingdom on the technical curriculum of "Digital 101" course, providing six workshops for two hours each
- 15 Jan-20 Dec 2022  **Future Ambassadors Program at the Ministry of Communications and Information Technology**, Riyadh, Saudi Arabia, Stanford Center for Professional Development Program: Digital 101, Attending six workshops for two hours each

### Event Mentor/Judge

- 6 Nov 2024  **BNG: to build innovative minds Challenge**, Deanship of Students Affairs, University of Tabuk, Saudi Arabia, Judge for BNG Challenge
- 5 Oct 2024  **NASA International Space Apps Challenge**, Deanship of Students Affairs, University of Tabuk, Saudi Arabia, Judge for Space Apps Challenge
- 4 Feb 2024  **|2|-Thon** Deanship of Student Affairs, University of Tabuk, Saudi Arabia, A Judge for Scientific Patents
- 18 and 28 Jan 2024  **Princess Seetah Award** Deanship of Student Affairs, University of Tabuk, Saudi Arabia, A Substituted Judge for Sustainable Solutions
- 27 Jan 2024  **2nd Global Game Jam** Google Developer Students Club, Deanship of Student Affairs, University of Tabuk, Saudi Arabia, A Judge of results
- 7 Oct 2023  **NASA International Space Apps Challenge**, Deanship of Students Affairs, University of Tabuk, Saudi Arabia, Judge for Space Apps Challenge
- 2-5 Feb 2023  **Xthon-2 event**, Deanship of Students Affairs, University of Tabuk, Saudi Arabia, Judge for Asynchronous Learning Track
- 13-15 Sep 2022  **Global Game Jam** Google Developer Students Club, Deanship of Student Affairs, University of Tabuk, Saudi Arabia, A mentor to teams and Judge of results
- 3-7 Jan 2021  **Xthon-1 event**, Deanship of Student Affairs, University of Tabuk, Saudi Arabia, Teams Mentor for Sustainable Environment Applications Challenge

### Presenter

- 30 Nov-2 Dec 2021  **The IEEE 2021 2nd International Conference on Computing and Information Technology (ICCIT)**, at the University of Tabuk, Saudi Arabia, Event presenter

### Participant

- 19-20 Dec 2023  **Digital Governance Forum**, Riyadh, Saudi Arabia, Investigating methods of cooperation for the data management office at the University of Tabuk
- 13-14 Sep 2023  **The IEEE 2023 3rd International Conference on Computing and Information Technology (ICCIT)**, Grand Millennium, University of Tabuk, Tabuk, Saudi Arabia, Session chair and participant
- 1 Dec 2022-1 Jan 2023  **Digital Innovation Award of the Ministry of Communications and Information Technology**, hybrid (Riyadh and Online), Participant in scientific research "SARA for Diabetic Children" and attending workshops and a month-long training program
- 13-15 Sep 2022  **Research Partnership Day**, Grand Millennium, Vice Rectorate for Postgraduate Studies and Scientific Research, University of Tabuk, Participation in the session on protecting natural reserves
-  **Global Summit on Artificial Intelligence**, Riyadh, Saudi Arabia, Attend conference activities by special invitation



## University and Community Services (continued)

- 19 Apr 2022     **International Education Conference and Exhibition**, in Riyadh, Saudi Arabia, Attending conference activities, some of the workshops held, and being in the university corner
- 1-3 Feb 2022     **LEAP 2022**, Riyadh, Saudi Arabia, Exploring cooperation for the Industrial Innovation and Robotics Center
- 22 Oct 2021     **The Knowledge Society Series in E-Learning workshop**, Deanship of E-Learning and Distance Education, University of Tabuk, Tabuk, Saudi Arabia, participate in discussions.

## Teaching




### Fall 2010 - First Semester 1431

- CE 5 224     **Data Structure**, 3 lecture credit hours, Community Collage, Associate Diploma



### Spring 2010 - Second Semester 1431

- CSC 102     **Computer Programming 2**, 2 lab credit hours, CS Bachelor



### Fall 2011 - First Semester 1432

- DM 241     **Introduction to Computer**, 2 lecture, 2 lab credit hours, CS Bachelor
- CSC 112     **Programming Languages**, 8 lab credit hours, CS Bachelor
- CSC 109     **Computer Ethics**, 2 lecture credit hours, CS Bachelor




### Spring 2011 - Second Semester 1432

- CSC 101     **Computer Programming 1**, 2 lab credit hours, CS Bachelor
- CSC 102     **Computer Programming 2**, 6 lab credit hours, CS Bachelor


### Fall 2012 - First Semester 1433

- CSC 210     **Computer Organization with Assembly**, 6 lab credit hours, CS Bachelor
- CSC 220     **Data Structure and Algorithms**, 4 lab credit hours, CS Bachelor






### Spring 2013 - Second Semester 1433

- CSC 101     **Theory of Computation**, 3 lecture credit hours, CS Bachelor
- CSC 210     **Computer Organization with Assembly**, 2 lab credit hours, CS Bachelor
- CSC 491     **Graduation Project**, 2 lab credit hours, CS Bachelor





### Spring 2021 - Second Semester 1442

- CSC 102     **Computer Programming 2**, 12 lecture, 2 lab credit hours, CS Bachelor

### Fall 2021 - First Semester 1443


- CSC 490     **Graduation Project 1**, 2 credit hours, CS Bachelor
- CSC 102     **Computer Programming 2**, 6 lecture credit hours, CS Bachelor
- CIS 611     **Big Data Analytics**, 3 lecture credit hours, Master of Data Science
- CIS 605     **Programming for Data Science**, 3 lecture credit hours, Master of Data Science
- CSC 624     **Research Project 1**, 3 credit hours, Master of Artificial Intelligence

### Spring 2022 - Second Semester 1443








- CSC 490     **Graduation Project 1**, 3 credit hours, CS Bachelor
-  **Graduation Project 1**, 6 credit hours, CS Bachelor
- CSC 101     **Computer Programming 1**, 3 lecture credit hours, CS Bachelor
- CIS 601     **Data Science Fundamentals**, 3 lecture credit hours, Master of Artificial Intelligence

## Teaching (continued)







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CSC 624     **Research Project 2**, 3 credit hours, Master of Artificial Intelligence



### Fall 2022 - First Trimester 1444

- CIT 0341     **IT Project Management** , 8 lecture credit hours, IT Bachelor
- CSC 0490     **Graduation Project 1**, 1 credit hours, CS Bachelor
- CIT 0490     **Graduation Project 1**, 1 credit hours, IT Bachelor
- CSC 1101     **Introduction to Computing**, 5 lecture credit hours, CS Bachelor
- CIS 0611     **Big Data Analytics**, 4 lecture credit hours, Master of Data Science
- CIT 0616     **Introduction to Cyber Security and Digital Forensic**, 4 lecture credit hours, Master of Forensic Accounting
- CSC 0624     **Research Project 1**, 3 credit hours, Master of Artificial Intelligence





### Winter 2022 - Second Trimester 1444

- CSC 0452     **Computer Graphics**, 5 lecture credit hours, CS Bachelor
- CSC 0492     **Selected Topics in Computer Science** , 5 credit hours, CS Bachelor
- CSC 0491     **Graduation Project 2**, 3 credit hours, CS Bachelor
- CIT 0491     **Graduation Project 2**, 3 credit hours, IT Bachelor
- CIT 0603     **Database Security**, 5 lecture and 1 lab credit hours, Master of Information Security
- CSC 0624     **Research Project 2**, 3 credit hours, Master of Artificial Intelligence






### Spring 2023 - Third Trimester 1444

- CIT 0453     **Multimedia Systems**, 15 lecture credit hours, IT Bachelor
- CSC 0624     **Research Project 3**, 3 credit hours, Master of Artificial Intelligence






### Fall 2023 - First Semester 1445

- CSC 420     **Theory of Computation**, 9 lecture credit hours, CS Bachelor
- CIT 453     **Multimedia Systems**, 3 lecture credit hours, IT Bachelor
- CSC 1102     **Problem Solving and Programming Concepts** , 2 lecture credit hours, CS Bachelor
- CIS 611     **Big Data Analytics**, 3 lecture credit hours, Master of Data Science

### Spring 2024 - Second Semester 1445

- CSC 420     **Theory of Computation**, 3 lecture credit hours, CS Bachelor
- CSC 1203     **Advanced Programming Methods**, 9 lecture credit hours, CS Bachelor
- CSC 1101     **Introduction to Computing**, 2 lecture credit hours, CS Bachelor
- CSC 490     **Graduation Project 1**, 1 credit hours, CS Bachelor
- CIT 616     **Introduction to Cybersecurity and Digital Forensics** , 3 lecture credit hours, Master of Forensic Accounting

### Fall 2024 - First Semester 1446

- CSC 420     **Theory of Computation**, 6 lecture credit hours, CS Bachelor
- CSC 1201     **Object Oriented Programming**, 6 lecture credit hours, CS Bachelor
- CSC 490     **Graduation Project 1**, 1 credit hours, CS Bachelor
- CSC 491     **Graduation Project 2**, 3 credit hours, CS Bachelor
- 606 CSC     **Computer Vision**, 3 lecture credit hours, Master of Artificial Intelligence

## Research Publications

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### Journal Articles



- 1 Alhakamy, A. (2024a). Extended reality (xr) toward building immersive solutions: The key to unlocking industry 4.0. *ACM Comput. Surv.*, 56(9). [doi:10.1145/3652595](https://doi.org/10.1145/3652595)
- 2 Alhakamy, A. (2023a). Digital vaccination passport and administrative burden of covid-19 official application based on twitter(x) discourse: Public interest vs democracy. *Multimedia Tools and Applications*, 23(7). [doi:10.1007/s11042-023-17598-7](https://doi.org/10.1007/s11042-023-17598-7)
- 3 Alatawi, H., Albalawi, N., Shahata, G., Aljohani, K., Alhakamy, A., & Tuceryan, M. (2023). Augmented reality-assisted deep reinforcement learning-based model towards industrial training and maintenance for nanodrop spectrophotometer. *Sensors*, 23(13). [doi:10.3390/s23136024](https://doi.org/10.3390/s23136024)
- 4 Alhakamy, A. (2023b). Fathoming the mandela effect: Deploying reinforcement learning to untangle the multiverse. *Symmetry*, 15(3). [doi:10.3390/sym15030699](https://doi.org/10.3390/sym15030699)
- 5 Alhakamy, A., Alhowaity, A., Alatawi, A. A., & Alsaadi, H. (2023). Are used cars more sustainable? price prediction based on linear regression. *Sustainability*, 15(2). [doi:10.3390/su15020911](https://doi.org/10.3390/su15020911)
- 6 Albalawi, S., Alshahrani, L., Albalawi, N., Kilabi, R., & Alhakamy, A. (2022). A comprehensive overview on biometric authentication systems using artificial intelligence techniques. *International Journal of Advanced Computer Science and Applications*, 13(4). [doi:10.14569/IJACSA.2022.0130491](https://doi.org/10.14569/IJACSA.2022.0130491)
- 7 Alharbi, R., Alageel, N., Alsayil, M., Alharbi, R., & Alhakamy, A. (2022). Prediction of oil production through linear regression model and big data tools. *International Journal of Advanced Computer Science and Applications*, 13(12). [doi:10.14569/IJACSA.2022.0131246](https://doi.org/10.14569/IJACSA.2022.0131246)
- 8 Alomani, S. M., Alhawiti, N. I., & Alhakamy, A. (2022). Prediction of quality of water according to a random forest classifier. *International Journal of Advanced Computer Science and Applications*, 13(6). [doi:10.14569/IJACSA.2022.01306105](https://doi.org/10.14569/IJACSA.2022.01306105)
- 9 Alhakamy, A., & Tuceryan, M. (2020a). Real-time illumination and visual coherence for photorealistic augmented/mixed reality. *ACM Comput. Surv.*, 53(3). [doi:10.1145/3386496](https://doi.org/10.1145/3386496)
- 10 Trajkova, M., Alhakamy, A., Cafaro, F., Vedak, S., Mallappa, R., & Kankara, S. R. (2020). Exploring casual covid-19 data visualizations on twitter: Topics and challenges. *Informatics*, 7(3). [doi:10.3390/informatics7030035](https://doi.org/10.3390/informatics7030035)

## Conference Proceedings

- 1 Alhakamy, A. (2024b). "xr is a game": Exploring people's reasons for using, limiting, and abandoning extended reality. In *2024 ieee international conference on real-time computing and robotics (rcar)* (pp. 271–278). [doi:10.1109/RCAR61438.2024.10670927](https://doi.org/10.1109/RCAR61438.2024.10670927)
- 2 Alessa, N., Majdua, A., Alshehri, S., Alhawiti, M., Aljohani, R., & Alhakamy, A. (2023). Banking in terms of deposit prediction based on machine learning and big data analytics. In *2023 11th international conference on control, mechatronics and automation (iccma)* (pp. 69–74). [doi:10.1109/ICCMA59762.2023.10374595](https://doi.org/10.1109/ICCMA59762.2023.10374595)
- 3 Alshammari, A., Alshammari, R., Altalak, M., Alshammari, K., & Alhakamy, A. (2022). Credit-card fraud detection system using big data analytics. In *2022 international conference on electrical, computer, communications and mechatronics engineering (iceccme)* (pp. 1–7). [doi:10.1109/ICECCME55909.2022.9987791](https://doi.org/10.1109/ICECCME55909.2022.9987791)
- 4 Alhakamy, A., Trajkova, M., & Cafaro, F. (2021). Show me how you interact, i will tell you what you think: Exploring the effect of the interaction style on users' sensemaking about correlation and causation in data. In *Designing interactive systems conference 2021* (pp. 564–575). [doi:10.1145/3461778.3462083](https://doi.org/10.1145/3461778.3462083)
- 5 Alhakamy, A., Cafaro, F., Trajkova, M., Kankara, S., Mallappa, R., & Veda, S. (2020). Design strategies and optimizations for human-data interaction systems in museums. In *2020 ieee 20th international conference on advanced learning technologies (icalt)* (pp. 246–248). [doi:10.1109/ICALT49669.2020.00081](https://doi.org/10.1109/ICALT49669.2020.00081)

- 6 Trajkova, M., Alhakamy, A., Cafaro, F., Mallappa, R., & Kankara, S. R. (2020). Move your body: Engaging museum visitors with human-data interaction. In *Proceedings of the 2020 chi conference on human factors in computing systems* (pp. 1–13). [doi:10.1145/3313831.3376186](https://doi.org/10.1145/3313831.3376186)
- 7 Alhakamy, A., & Tuceryan, M. (2019a). An empirical evaluation of the performance of real-time illumination approaches: Realistic scenes in augmented reality. In L. T. De Paolis & P. Bourdot (Eds.), *Augmented reality, virtual reality, and computer graphics* (pp. 179–195). [doi:10.1007/978-3-030-25999-0\\_16](https://doi.org/10.1007/978-3-030-25999-0_16)
- 8 Alhakamy, A., & Tuceryan, M. (2019b). Polarization-based illumination detection for coherent augmented reality scene rendering in dynamic environments. In M. Gavrilova, J. Chang, N. M. Thalmann, E. Hitzer, & H. Ishikawa (Eds.), *Advances in computer graphics* (pp. 3–14). [doi:10.1007/978-3-030-22514-8\\_1](https://doi.org/10.1007/978-3-030-22514-8_1)
- 9 Alhakamy, A., & Tuceryan, M. (2019c). Ar360: Dynamic illumination for augmented reality with real-time interaction. In *2019 ieee 2nd international conference on information and computer technologies (icict)* (pp. 170–174). [doi:10.1109/INFOCT.2019.8710982](https://doi.org/10.1109/INFOCT.2019.8710982)
- 10 Alhakamy, A., & Tuceryan, M. (2019d). Cubemap360: Interactive global illumination for augmented reality in dynamic environment. In *2019 southeastcon* (pp. 1–8). [doi:10.1109/SoutheastCon42311.2019.9020588](https://doi.org/10.1109/SoutheastCon42311.2019.9020588)
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## Recommendations

Available on LinkedIn and upon Request