Fatemah Hamdan Alghamedy

Assistant Professor

Personal Data

Nationality | Saudi

Department | Computer

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Language Proficiency

Language	Read	Write	Speak
Arabic	Yes	Yes	Yes
English	Yes	Yes	Yes
Others	--	--	--

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2019	Ph.D. degree in Computer Science	USA	University of Kentucky
2013	Master degree in Computer Science Outstanding Graduating Students for 2013-14	USA	Arkansas State University
2006	Bachelor in Computer Science	Saudi Arabia	King Faisal University

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Enhance NMF-Based Recommendation Systems with Social Information Imputation
Master	CFPh-Growth Tree: A Data Structure for Mining Association Rules with Skewed Support Distribution
Fellowship	Fellow of the Higher Education Academy from AdvanceHE
Fellowship	Academic Leadership

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Assistant Professor	Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia	2019 - now
Research Assistant	University of Kentucky, KY, USA	1/2017-5/2017 9/2018-5/2019
Teaching Assistant	University of Kentucky, KY, USA	9/2016-12/2016 9/2017-12/2017
Lecture	Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia	2013-2019
Teaching Assistant	Arkansas State University, AR, USA	9/2013 – 12/2013
Teaching Assistant	Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia	2007-2012

Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Department Chair	Applied Collage	2025-now
Secretary of the Department Council	Applied Collage	2023 – 2024 2019-2020
Deputy Head of the Computer Department	Applied Collage	2024
Deputy Head of the Computer Department	Community Collage	2019 - 2020

Scientific Achievements

Published Refereed Scientific Researches
(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	**Fatemah H Alghamedy**, May Issa Aldossary, Dina A Alabbad, Reem A Alshami, Maimonah S Altaweel, Renad A Alnuaim, Haya A Alzahim, Shahad F Alotaibi, Sumayh S Aljameel, Arwa H Alghamdi, Sunday Olusanya Olatunji	EEG-Driven Machine Learning for Stroke Detection in High-Risk Patients	IEEE Access 2025
2	Muhammad Shafiq, Fan Quanrun, **Fatemah H**	DualEye-FeatureNet: A Dual-Stream Feature Transfer	IEEE Access 2024

	Alghamedy, Waeal J Obidallah	Framework for Multi-Modal Ophthalmic Image Classification	
3	**Fatemah H Alghamedy**, Nahla El-Haggar, Albandari Alsumayt, Zeyad Alfawaer, Majid Alshammari, Lobna Amouri, Sumayh S Aljameel, Sarah Albassam	Unlocking a Promising Future: Integrating Blockchain Technology and FL-IoT in the Journey to 6G	IEEE Access 2024
4	Albandari Alsumayt, Heba Elbeh, Mohamed Elkawkagy, Zeyad AlFawaer, **Fatemah H. Alghamedy**, Majid Alshammari, Sumayh S. Aljameel, Sarah Albassam, Shahad AlGhareeb, Khadijah Alamoudi	A Study of Android Security Vulnerabilities and Their Future Prospects	HighTech and Innovation Journal 2024
5	Albandari Alsumayt, Zeyad M. Alfawaer, Nahla El-Haggar, Majid Alshammari, **Fatemah H. Alghamedy**, Sumayh S. Aljameel, Dina A. Alabbad, May Issa Aldossary	Boundaries and Future Trends of ChatGPT Based on AI and Security Perspectives	HighTech and Innovation Journal 2024
6	El-Haggar, Nahla and Amouri, Lobna and Alsumayt, Albandari and **Alghamedy, Fatemah H**. and Aljameel, Sumayh S.	The Effectiveness and Privacy Preservation of IoT on Ubiquitous Learning: Modern Learning Paradigm to Enhance Higher Education	Applied Sciences MDPI 2023
7	Muhammad Imran Nadeem and Kanwal Ahmed and Zhiyun Zheng and Dun Li and Muhammad Assam and Yazeed Yasin Ghadi and **Fatemah H. Alghamedy** and Elsayed Tag Eldin	SSM: Stylometric and semantic similarity oriented multimodal fake news detection	Journal of King Saud University - Computer and Information Sciences 2023
8	Fahad Masood, Wajid Ullah Khan, Khalil Ullah, Ahmad Khan, **Fatemah H. Alghamedy** and Hanan Aljuaid	A Hybrid CNN-LSTM Random Forest Model for Dysgraphia Classification from Hand-Written Characters with Uniform/Normal Distribution	Applied Sciences MDPI 2023
9	**Fatemah H Alghamedy**, Muhammad Shafiq, Lijuan Liu, Affan Yasin, Rehan Ali Khan,and, Hussien Sobahi Mohammed	Machine Learning-Based Multimodel Computing for Medical Imaging for Classification and Detection of Alzheimer Disease	Computational Intelligence and Neuroscience 2022

10	Turki Alanzi, Fahad Alanezi, Demah Alsalman, Asma Alfayez, Reem Aldossary, Hala Alhodaib, Bashair AlThani, Maha AlShammari, **Fatemah Alghamedy,** and Afnan Aljaffary	A comparative study of strategies for containing the COVID-19 pandemic in Gulf Cooperation Council countries and the European Union	Informatics in Medicine Unlocked, 2021, 100547
11	Fahad Alanezi, Anan Aljahdali, Seham M Alyousef, Hebah Alrashed, and Hayat Mushcab, Bashair AlThani, **Fatemah Alghamedy**, Hessa Alotaibi, Amjad Saadah, and Turki Alanzi	A Comparative Study on the Strategies Adopted by the United Kingdom, India, China, Italy, and Saudi Arabia to Contain the Spread of the COVID-19 Pandemic	Journal of healthcare leadership, 2020, 12: 117
12	Fahad Alanezi, Anan Aljahdali, and Seham Alyousef, Wyam Alshaikh, and Hayat Mushcab, Bashair AlThani, **Fatemah Alghamedy**, and Hussah Alotaibi, and Sharifah Alrajhi, and Dhabia Alabbadi	Investigating healthcare practitioners' attitudes towards the COVID-19 outbreak in Saudi Arabia: a general qualitative framework for managing the pandemic	Informatics in medicine unlocked, 2020, 100491
13	**Fatemah Alghamedy** and Jun Zhang	Imputation strategies for cold-start users in NMF-based recommendation systems.	In Proceedings of the Proceedings of the 2019 3rd International Conference on Information System and Data Mining, pp. 119-128. Houston, Texas, USA, April 6-8, 2019.
14	**Fatemah Alghamedy** and Jun Zhang	Enhance NMF-based recommendation systems with social information imputation.	Computer Science & Information Technology, Vol. 8, No. 15, pp. 37-54, November, 2018.
15	**Fatemah Alghamedy**, Maryam Al-Ghamdi, and Jun Zhang	Imputing item auxiliary information in NMF-based collaborative filtering.	Computer Science & Information Technology, Vol. 8, No. 15, pp. 21-36, November, 2018

16	**Fatemah Alghamedy**, Jeevith Bopaiah, Derek Jones, Xiaofei Zhang, Heidi Weiss, Sally Ellingson	Incorporating protein dynamics through ensemble docking in machine learning models to predict drug binding.	AMIA Joint Summits on Translational Science proceedings. *AMIA Joint Summits on Translational Science*, Vol. 2017, pp. 26--34, May, 2018.
17	Derek Jones, Jeevith Bopaiah, **Fatemah Alghamedy**, Nathan Jacobs, Heidi Weiss, W.A. de Jong, Sally Ellingson	Polypharmacology within the full kinome: a machine learning approach.	AMIA Joint Summits on Translational Science, Vol. 2017, pp. 98--107, May, 2018
18	**Fatemah Alghamedy**, Xiwei Wang, and Jun Zhang	Imputing trust network information in NMF-based collaborative filtering.	In Proceedings of the Proceedings of the ACMSE 2018 Conference, pp. 2:1--2:8. Richmond, Kentucky, USA, March 29 - 31, 2018.

Books

#	Book Title	Authors	Publisher
1	**البرنامج الدراسي في التعليم الجامعي تصميمه ومواءمته مع متطلبات سوق العمل**	د. خالد صالح الزهراني، د. هناء سليمان الرشيد، د. محمد ابراهيم الشملة، **د. فاطمة حمدان الغامدي**، د. نهى سراج لبني	جامعة الامام عبد الرحمن بن فيصل 2023
2			

Current Researches

#	Research Title	Name of Investigator(s)
1	**Driving Sales and Enhancing Customer Satisfaction via EEG Based Personalized Recommendations**	
2	**GAN-based Recommendation Systems**	

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
	المؤتمر والمعرض الخليجي الرابع لتحديات الامن السيبراني	Kawit 6-7 Nov. 2023	Poster

Membership of Scientific and Professional Societies and Organizations

- Reviewer at Knowledge Based Journal (Q1)
- Reviewer at Biomedical Signal Processing and Control Journal (Q1)
- Reviewer at PLoS ONE Journal (Q1)

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Computer Origination	IT120	3 hours per week (16 weeks)
2	Database Management System	CIS 212	2 hours per week (16 weeks)
3	Data Structure	CS 213	3 hours per week (16 weeks)
4	Graduation Project I	CS 304	3 hours per week (16 weeks)
5	Graduation Project II	CS 314	3 hours per week (16 weeks)
6	Information Security	COMP 204	3 hours per week (16 weeks)
7	Web Programming	COMP 314	3 hours per week (13 weeks)
8	Operating Systems	COMP 233	3 hours per week (13 weeks)
9	Data Mining	CS 325	3 hours per week (13 weeks)
10	Artificial Intelligence: Principles and Techniques	ARTI 401	3 hours per week (13 weeks)
11	Field Training	COMP 340	3 hours per week (13 weeks)
12	Cyber security and privacy	COMP 211	3 hours per week (16 weeks)
12	Introduction to AI	COMP 252	3 hours per week (16 weeks)

Course Coordination

#	Course Title and Code	Coordination	Undergrad.	Postgrad
1	Computer Origination (IT120)	Yes	Yes	
2	Database Management System (IT120)	Yes	Yes	
3	Data Structure (CS 213)	Yes	Yes	
4	Information Security (COMP 204)	Yes	Yes	
5	Introduction to AI (COMP 252)	Yes	Yes	

Guest/Invited Lectures for Undergraduate Students

#	Activity/Course Title and Code	Subject	College and University or Program	Date
1	AI and Data Science	CS	برنامج موهبة الصيفي الاكاديمي الاثرائي	Summer 2024
2	Research	CS	برنامج موهبة الصيفي البحثي الاثرائي – جامعة الملك عبد العزيز	Summer 2024

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
1	L3-4	10	2019	2020
2	L5-6	13	2020	2021
3	All levels	6	2021	2022
4	All levels	30	2022	2023
5	All levels	35	2023	2024

Research Supervision

#	Degree Type	Title	Institution	Date
1	Bachelor	Arabic Integrity: Enhancing Clarity in Spoken Arabic	IAU	2024-2025
2	Bachelor	Personalized Points of Interest (POI) Recommendation System for Tourism in the Capital City of Saudi Arabia - Riyadh	IAU	2024-2025
3	Bachelor	Signal It: Stroke detection based on bio-signals	IAU	2023-2024

Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

Administrative Responsibilities

#	From	To	Position	Organization
1	2019	2020	Computer department coordinator	Community College
2	2024	2025	Computer department coordinator	Applied Collage

Committee Membership

#	From	To	Position	Organization
1	2019	2022	Head	Scientific Council of the Computer Department
2	2019	2021	Member	The Standing Committee for Study Plans and Programs
3	2019	2022	Head	Scholarship Student Coordinator of the Computer Department

3	2019	2020	Secretary	Computer Department Council
4	2023	now		
5	2024	now	Head	Examination Committee of the Computer Department
6	2019	2020		
7	2022	now	Head	Faculty Affairs Committee of the Computer Department

Scientific Consultations

#	From	To	Institute	Full-time or Part-time

Volunteer Work

#	From	To	Type of Volunteer	Organization
1	2024	2025	Mentors	PFUTL
2	2024		Instructor	برنامج موهبة الصيفي الاكاديمي الاثرائي
3	2024		Workshop	جمعية تراحم
4	2023	2024	Mentors	PFUTL
5	2022	2023	Mentors	PFUTL
6	2020	2021	Mentors	PFUTL

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Machine Learning
2	Deep Learning
2	Data Mining
3	Data Science
4	Data Analysis
5	Programming Language: Python, Java, MATLAB, C++, SQL, LaTeX, CUDA, OpenGL, AutoCAD.

Last Update

8/2025