Nehad Mohamed Abdel Rahman Ibrahim

POSITION: Ph.D. (Computer Science Department, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University, KSA)

Biography

Dr. Nehad Mohammed Ibrahim has been a faculty member in the Computer Science and Information Technology College at Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia since 2016. He obtained his B.Sc. in systems and computer engineering from Al-Azhar University-Egypt in 1997. From 2008 to 2014, he served as the software development manager at First Egyptian Inc. In 2008, he completed his M.Sc. in systems and computer engineering from Al-Azhar University-Egypt, specializing in Distributed Object-Oriented Database. He then went on to earn his Ph.D. in systems and computer engineering from Al-Azhar University-Egypt in 2020, focusing on Text Mining of Arabic Content on The Web.

Dr. Nehad Mohammed Ibrahim has contributed significantly to the field of Natural Language Processing and artificial intelligence applications, with numerous published papers. He has also taken on various roles within the computer science department, including department coordinator, and has actively participated in multiple committees, such as those related to scientific research, practical teaching, and professional certificate alignment.

Furthermore, Dr. Nehad Mohammed Ibrahim has made contributions to the Sudi Aramco Cybersecurity Chair and participated in the HPC conference in 2022.

Personal Data

Nationality	|	Egyptian
Date of Birth	|	8/4/1974
Department	|	Computers & Systems – Faculty of Engineering, AL AZHAR University, Cairo, Egypt
Emails	|	nmaibrahim@iau.edu.sa
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ORCID	|	https://orcid.org/0000-0002-7681-5594
Google Scholar	|	https://scholar.google.com/citations?user=GU-MLbIAAAAJ&hl=en
Scopus		https://www.scopus.com/authid/detail.uri?origin=resultslist&authorId=57222496761&zone=
Publons	|	https://publons.com/researcher/3740437/nehad-ibrahim/
Research Gate	|	https://www.researchgate.net/profile/Nehad_Ibrahim

Twitter | https://twitter.com/NehadMIbrahim
Linked-in | https://www.linkedin.com/in/nehad-mohamed-85b31a16/

Academic Qualifications

Date	Academic Degree	Place of Issue	Address
2020	Ph.D. Computer Engineering	Faculty of Engineering, AL AZHAR University	Cairo – Egypt
2008	Master's in computer engineering	Faculty of Engineering, AL AZHAR University	Cairo – Egypt
1997	BSc. in Computer Engineering	Faculty of Engineering, AL AZHAR University	Cairo – Egypt

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

Ph.D.	Computers and Systems Dep. (AI: **Text Mining of Arabic content on the Web**)
Master	Computers and Systems Dep. (**Distributed Object-Oriented Database**)

Published Refereed Scientific Research

Year	Research Title, and Authors	Journal
2023	**Transfer Learning Approach to Seed Taxonomy: A Wild Plant Case Study** Nehad M. Ibrahim et al.	Big Data Cognitive Computing: https://www.mdpi.com/2504-2289/7/3/128
2023	**Breast Cancer Detection in the Equivocal Mammograms by AMAN Method** Nehad M. Ibrahim et al.	Applied Sciences: https://www.mdpi.com/2076-3417/13/12/7183
2023	**A Novel Metadata Based Multi-Label Document Classification Technique** Naseer Ahmed Sajid, Munir Ahmad1, Atta-ur Rahman, Gohar Zaman, Mohammed Salih Ahmed, Nehad Ibrahim, Mohammed Imran B. Ahmed, Gomathi Krishnasamy, Reem Alzaher, Mariam Alkharraa, Dania AlKhulaifi, Maryam AlQahtani, Asiya A. Salam, Linah Saraireh, Mohammed Gollapalli and Rashad Ahmed	Computer Systems Science and Engineering 46(2):2195-2214 DOI: 10.32604/csse.2023.033844
2022	**Well Performance Classification and Prediction: Deep Learning and Machine Learning Long Term Regression Experiments on Oil, Gas, and Water Production** Nehad M. Ibrahim et al.	Sensors https://www.mdpi.com/1424-8220/22/14/5326

Year	Title	Source
2022	**Utilizing Deep Learning in Arabic Text Classification Sentiment Analysis of Twitter** Nehad M. Ibrahim et al.	(IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 13, No. 12, 2022
2022	**A deep learning approach to intelligent fruit identification and family classification**. Nehad M. Ibrahim et al.	Multimedia Tools and Applications https://link.springer.com/article/10.1007/s11042-022-12942-9
2022	**A Neuro-Fuzzy Approach to Road Traffic Congestion Prediction** Mohammed Gollapalli, Atta-ur-Rahman, Dhiaa Musleh, Nehad Ibrahim, Muhammad Adnan Khan, Sagheer Abbas, Ayesha Atta, Muhammad Aftab Khan, Mehwash Farooqui, Tahir Iqbal, Mohammed Salih Ahmed, Mohammed Imran B. Ahmed, Dakheel Almoqbil, Majd Nabeel, Abdullah Omer	Computers, Materials & Continua https://www.techscience.com/cmc/v73n1/47829
2022	**Cloud-Based Smart Grids: Opportunities and Challenges**. Atta-ur-Rahman, Nehad M. Ibrahim, Dhiaa Musleh, Mohammed Aftab A. Khan, Sghaier Chabani & Sujata Dash	https://link.springer.com/chapter/10.1007/978-981-16-8739-6_1 Conference proceedings article
2022	**A new deep learning system for wild plants classification and species identification: using leaves and fruits**. Nehad M. Ibrahim et al.	https://link.springer.com/chapter/10.1007/978-3-030-98741-1_3
2021	**E-Triage Systems for COVID-19 Outbreak: Review and Recommendations**. Fahd Alhaidari, Abdullah Almuhaideb, Shikah Alsunaidi, Nehad Ibrahim, Nida Aslam, Irfan Ullah Khan, Fatema Shaikh, Mohammed Alshahrani, Hajar Alharthi, Yasmine Alsenbel and Dima Alalharith	Sensors | Free Full-Text | E-Triage Systems for COVID-19 Outbreak: Review and Recommendations (mdpi.com) April, 2021
2021	**Cough Sound Detection and Diagnosis Using Artificial Intelligence Techniques: Challenges and Opportunities**. Kawther S. Alqudaihi, Nida Aslam, Irfan Ullah Khan, Abdullah M. Almuhaideb, Shikah J. Alsunaidi, Nehad M. Abdel Rahman Ibrahim, Fahd A. Alhaidari, Fatema S. Shaikh, Yasmine M. Alsenbel, Dima M. Alalharith, Hajar M. Alharthi, Wejdan M. Alghamdi, and Mohammed S. Alshahrani	IEEE Access (July 2021), D.O.I: 10.1109/ACCESS.2021.3097559
2021	**Applications of Big Data Analytics to Control COVID-19 Pandemic** Shikah J. Alsunaidi, Abdullah M. Almuhaideb, Nehad M. Ibrahim, Fatema S. Shaikh, Kawther S. Alqudaihi, Fahd A. Alhaidari, Irfan Ullah Khan, Nida Aslam and Mohammed S. Alshahrani	https://www.mdpi.com/1424-8220/21/7/2282 March, 2021
2021	**Supervised Machine Learning-based Prediction of COVID-19** Atta-ur-Rahman, Kiran Sultan, Iftikhar Naseer, Rizwan Majeed, Dhiaa Musleh, Mohammed AbdulSalam Gollapalli, Sghaier Chabani, Nehad Ibrahim, Shahan Yamin Siddiqui, and Muhammad Adnan Khan	Computers, Materials and Continua Jun 2021

2020	**Digital Library of Online PDF Sources: An ETL Approach** Gohar Zaman, Hairulnizam Mahdin, Khalid Hussain, Atta-ur-Rahman, Nehad Ibrahim and Noor Zuraidin Mohd Safar1	IJCSNS International Journal of Computer Science and Network Security, VOL.20 No.11, November 2020
2019	**A Language Model for Arabic Texts Disambiguation using Deep Learning** Nehad M. Ibrahim et al.	EJLE https://ejle.journals.ekb.eg/article_591 43.html
2019	**A New Model for Arabic Text Clustering by Word Embedding and Arabic Word Net** Nehad M. Ibrahim	Scholars Middle East Publishers, Dubai, United Arab Emirates, 17/10/2019, DOI: 10.36348/SJEAT.2019.v04i10.00 1
2018	**Text Mining using Deep Learning Article Review** Nehad M. Ibrahim	International Journal of Scientific & Engineering Research Volume 9, Issue 9, September-2018
2017	**New Approach for Text Mining of Arabic on the Web** Nehad M. Ibrahim et al.	IJCSIS(Vol. 15 No. 3 March 2017).
2007	**Insuring Locality: A load balancing protocol for fully replicated system** Al Metwally M. Mostafa, Nehad Mohamed, and Hany Harb,	In Proceedings of the ninth International Conference for Faculty of Engineering - Al Azhar University. Egypt, Cairo April 2007.

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Nehad M. Ibrahim et al.	COVID-19 Prediction Using Machine Learning Based on the Patient's Vital Signs: A Case for Saudi Arabia	CICN 2022 PMU https://doi.org/10.1109/CICN56167.2022.10008242
2	Nehad M. Ibrahim et al.	A new deep learning system for wild plants classification and species identification: using leaves and fruits	the 6th International Conference of Reliable Information and Communication Technology 2021 (IRICT 2021).

3	Naseer Ahmed Sajid, Munir Ahmad, Atta-ur Rahman, Nehad M. Ibrahim, Sujata Dash	Single-Label Vs Multi-Label: The Issues, Challenges and Insights of Contemporary Classification Schemes	2021 International Symposium of Asian Control Association on Intelligent Robotics and Industrial Automation (IRIA'21), Sep. 2021 Indian Institute of Technology (IIT)
4	Atta-ur-Rahman, Nehad M. Ibrahim, Dhiaa Musleh, Mohammed Aftab A. Khan, Sghaier Chabani, Sujata Dash	Cloud-based Smart Grids: Opportunities and Challenges	The 2nd international Conference on Biological Inspired Techniques in Many-Criteria Decision Making (BITMDM 2021)

Completed Research Projects

Name of Investigator(s) (Supported by)	Research Title	Contribution	Date
Fahd A. Alhaidari, Abdullah M. Almuhaideb, Shikah J. Alsunaidi, Nehad M. Ibrahim, Nida Aslam, Irfan Ullah Khan, Fatema S. Shaikh, Mohammed S. Alshahrani, Hajar M. Alharthi, Yasmine M. Alsenbel, Dima M. Alalharith KACST	Smart Health Monitoring system: Remote Triaging as a Proactive Measure to Contain the Spread of COVID-19.	• Research Assistant • Project Management	2020/2021

Contribution to Workshops

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Innovation Learning Jan 2020	Innovation at Imam Abdulrahman bin Faisal University	Workshop
2	Education Café Feb 2020	The Deanship of Academic Development at Imam Abdulrahman bin Faisal University	Workshop
3	Conference of Concerning Sustainable Development in Desert Areas	IAU in cooperation with An Nariyah district, 22 January 2019	Conference
4	Flipped classrooms	IAU- Deanship of Education Development, 22 January 2019	Workshop
5	The practical applications to teaching big classrooms	IAU- Deanship of Education Development, 9 January 2019	Workshop
6	Teaching from methodologies learning	IAU- Deanship of Education Development, Monday August 28 2018	Workshop

7	10 Formative& immediate Assessment Techniques in the Classroom	IAU- Deanship of Education Development, Monday August 27 2018	Workshop
8	Preventing Faculty Burnout	IAU- Deanship of Education Development, AGU 2018	Workshop
9	Interactive Teaching and Students Engagement	IAU- Deanship of Education Development, Tuesday, 27 March 2018	Workshop
10	Success in the Interpersonal & Responsibility	IAU, 11th Sep 2017	Workshop
11	Get Ready the First Day	IAU, 6th Feb 2017	Workshop
12	Constructing Test items for higher order Thinking	IAU, 9th Feb 2017	Workshop
13	Research Methodology	IAU, 12th Oct 2016	Workshop

Professional Record:

Rank	Place and Address of Work	Date
PhD (Academic Rank)	Computer science and Information Technology Lecturer – Imam Abdulrahman University	2021
Lecturer	Computer science and Information Technology Lecturer – Imam Abdulrahman University	2016-2020
Lecturer	Al Shaheq Inc. KSA	2015
Software Development Manager.	First Information Technology Inc. Egypt,	2009
Software Engineer.	First Information Technology Inc.	2002

Administrative Positions Held:

Administrative Position	Office	Date
CS Department Coordinator	Computer Science Department	2019 - Now
Section Head	Division laboratories in College of Computer Science and Information Technology	2016-Present
Red Hat Instructor	Red Hat Academy in College of Computer Science and Information Technology	2016

Teaching Activities

#	Course Title	Year
1	System Analysis & Design Course	2019 - 2018
2	Software Engineering Course	2021 - 2022
3	Red Hat Administration Course (1), 2016, IAU	2016-2017
4	Introduction to Computing	2016 - 2018

5	Object Oriented Programming 1	2018 - 2022
6	Data Structure	2018 - 2022
7	Fundamental of Programming	2021 – 2022
8	Proposal Graduate Project	2018 – 2022
9	Implementation Graduate Project	2018 – 2022
10	Algorithm Analysis & Design	2023 – 2024
11	Operating Systems	2023 - 2024

Brief Description of Undergraduate Courses Taught:

Software Engineering: This course presents both technical and managerial software engineering problems. Before studying some life cycle phases in depth, students should be exposed to fundamental aspects including the software life cycle and its phases, the software development models, Software Processes, Project Management, Project Planning, Agile Software Development, and different specialized systems.

Operating System: In this course, the student will study the basic concepts of operating systems (OS), the following concepts will be studied in this course: OS Overview, process description and control, threads, CPU scheduling, memory management, virtual memory, I/O management and disk scheduling, deadlock and file management.

Algorithm Analysis & Design: This course introduces mathematical foundations for analyzing and designing algorithms. The course covers various algorithm design paradigms including brute-force, divide-and-conquer, greedy algorithms, and dynamic programming. The course emphasizes solving some well-known- known problems including sorting, searching, and graph problems using algorithmic techniques learned in the course.

Object Oriented Programming: The purpose of this course is to provide students with fundamental knowledge of object-oriented programming (OOP). It emphasizes good software engineering principles and developing programming skills. Specific topics covered include fundamental concepts of object oriented (classes, methods, instantiation, communication by message, encapsulation, inheritance, overriding, dynamic dispatch, polymorphism, etc.) and some interesting packages (I/O, strings, etc.). In practice the programming language used is JAVA, as an introduction to JAVA language. Students should acquire some understanding of abstraction mechanisms, enumeration, JAVA Virtual Machines (JVM) and the byte code notion.

Data Structure: The aim of this course is to provide the fundamentals of data structures, and algorithm design from an object-oriented perspective which allows one to store collections of data efficiently with fast updates and queries. The course is mainly focused on array and linked list data structures, and their implementation of fundamental abstract data types like stacks, queues, trees, and graphs. Recursion is introduced in order to cover basic operations on these abstract data types, including traversal, insertion, deletion, and searching. Weekly labs allow exercising in Java programming.

System Analysis and Design: This course introduces the analysis and design of information systems within the context of an organization. The course approaches this by identifying the need for IT to enable organizational change and bring business value. Business process management and modeling techniques are used to analyze and model business requirements. This includes data, user and security requirements. The course lays down different approaches to systems analysis and design including SDLC, agile and UML.

Introduction to Computing: This course introduces the main concepts of computer science. It includes the basics of computing: hardware, Software, Connectivity, and users, Software aspects are introduced like Problems-Solving and programming: Algorithm development, Flowcharts, Looping, Some programming Features, Pseudo code, some structured programming concepts, Documentation, as well as Programming Languages: Machine language and assembly language, High-Level and Low-Level languages, assemblers, compilers and Interpreters. Finally, the course presents the computer and communication aspects, as well as different features of operating Systems.

Course Coordination

Course Title and Code	Undergrad.	From	To
System Analysis & Design – I	Level 8	01/2019	05/2019
Fundamental of Programming	Level 5	2021	2022
Object Oriented Programming – I	Level 5	2022	2022

Student Academic Supervision and Mentoring

Level	Number of Students	From	To
10	5	2019	2020
9	20	2019	2020
10	20	2020	2021
10	10	2021	2022
10	10	2022	2023

Administrative Responsibilities

#	From	To	Position	Organization
1	2019	Now	CS Dep. Coordinator	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University
2	2016	Present	Laboratory Head Division	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University

Committee Membership

From	To	Position	Organization
2018	2019	PCC (Professional Alignment Committee)	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University
2018	2019	SRC (Scientific & Research Committee)	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University
2016	2019	IT Unit	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University
2019	2020	Practical Teaching	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University
2021	2022	Faculty Search	Department of Computer Science, College of Computer Science and Information Technology, Imam Abdulrahman Bin Faisal University

Membership of Scientific and Professional Societies and Organizations

Title	Organization	Date
Computer Engineer	Egyptian Engineering Syndicate	1997 - Now
Professional Evaluation and Certification Board (PECB), Certified ISO 21500 Lead Project Manager	PECB: PMLPRM1015980-2016-10	24 October 2016
PSP (Personal Software Process) for Engineers, SECC (Software Engineering Competence Center), Egypt.	Software Engineering Competence Center	2009
IAENG (International Association of Engineers)	IAENG	2017-2021

Personal Key Competencies and Skills:

Machine Learning and AI Research
Development (C++, Java, UML)
Quality (CMMI)
Application Knowledge (Archiving Systems, Operation Systems And HR Systems)

Contacts of References in IAU (Imam Abdulrahman bin Faisal University):

#	Name	Academic Rank	Email
1	Prof. Nasro min-Allah	Full Professor in the Computer Science Department	nabdullatief@iau.edu.sa
2	Dr. S.O. Olatunji (Aadam)	Prof. Associate in the Computer Engineering Department	osunday@iau.edu.sa
3	Dr. Atta-ur-Rahman	Prof. Associate in the computer Science department	aaurrahman@iau.edu.sa
4	Dr. Dhiaa Musleh	Prof. Assistant in the Computer Science Department	daMusleh@iau.edu.sa

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Last Update

01/09/2023