



CURRICULUM VITAE

PERSONAL INFORMATION

Faculty Member Name: Mamdouh Mohammed Gomaa Mohammed

Academic Rank: Assistant Professor

College: IT

Department: Computer Science

Nationality: Egyptian

Address: : Shafa Badran – Amman – Jordan

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ACADEMIC QUALIFICATIONS

Degrees with fields, institution, and date

- B.S. in program, university, year. Graduated with Computer Science and Math degree with Very Good with honor total grade (84.34%), Faculty of Science, Minia University, 2003.
- M.Sc. in program, university, year. M. Sc. in Computer Science, Aug 2009. Faculty of Science, Computer Science Dept., Minia University, Minia, Egypt.
- Project / theses title: A Study of Some Image Coding Algorithms and Their Applications for Digital Images
- Ph.D. in program, university, year. The Degree of Doctor of Philosophy in Technical Sciences from Federal State Autonomous Educational Institution of Higher Education "Belgorod State National Research University", Belgorod, Russia. Thesis title: " ", 2017.
- Dissertation title: Face Detection Algorithms Based on Image Analysis and Processing

ACADEMIC EXPERIENCE

Duration: March 2025 till Now

- University: Amman Arab University
- Academic Rank: Assistant Professor
- Date the rank was granted: 03/2025
- The body granting the rank: Amman Arab University
- College: Department of Computer Science / Faculty of IT
- Country: Jordan

- Duration: October 2017 till Feb 2025
- University: Minia University
- Academic Rank: Assistant Professor
- Date the rank was granted: 10/2017
- The body granting the rank: Mina University
- College: Department of Computer Science / Faculty of Science
- Country: Egypt

Duration: February 2012 till September 2017

- University: Astrakhan State University
- Academic Rank: Ph.D. Student
- Date the rank was granted: 9/2017
- The body granting the rank: Belgorod State National Research University
- College: Department of Information Technologies / IT College
- Country: Russian

Duration: August 2009 till Feb 2012

- University: Minia University
- Academic Rank: Assistant Lecturer
- Date the rank was granted: 9/2009
- The body granting the rank: Mina University
- College: Department of Computer Science / Faculty of Science
- Country: Egypt

Duration: November 2003 till August 2009

- University: Minia University
- Academic Rank: Demonstrator
- Date the rank was granted: 7/2003
- The body granting the rank: Mina University
- College: Department of Computer Science / Faculty of Science
- Country: Egypt

NON-ACADEMIC EXPERIENCE

- Trainer in the Faculty Development Centre courses at Minia University
- Member of the judging committee for high school student projects at the governorate level in Minia, Egypt

CERTIFICATIONS OR PROFESSIONAL REGISTRATIONS

- - Oracle Database 10g : Introduction to SQL Ed 2
- - Oracle AS 10g R3 : Java Programming Ed 2.
- - Oracle AS 10g R3 : Build Java EE Applications I Ed 2.
- - Oracle Database 10g : Program with PL/SQL.
- Oracle Discoverer Administrator 10g: Develop an EUL Ed 1.
- Oracle AS discoverer 10g: Create Queries and Reports.
- Oracle 10g : Data Warehousing fundamentals.

CURRENT MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- None

HONORS AND AWARDS

- None

SERVICE ACTIVITIES

- None

THE MOST IMPORTANT PUBLICATIONS IN LAST FIVE YEARS

- [1] **Mamdouh Gomaa**, Ahmed Rabie, Al Hussien Seddik Saada, Osman Ali Sadek, Moheb R. Girgis. Improved Semantic Segmentation in Medical Imaging Using U-Net and Attention Mechanisms. Journal of Information Systems Engineering and Management 2025, 10 (18s).
- [2] Nazier, Mostafa Medhat, Mamdouh M. Gomaa, Mohamed M. Abdallah, and Awny Sayed. "Arabic Sentiment Analysis Using Optuna Hyperparameter Optimization and Metaheuristics Feature Selection to Improve Performance of LightGBM", International Journal of Advanced Computer Science & Applications 16, no. 2 (2025).
- [3] Ahmed, Eman, **Mamdouh Gomaa**, Ashraf Darwish, and Aboul Ella Hassanien. "Detecting the Factors Affecting Carbon Emissions in Food Recipes using Regression Models and Explainable Artificial Intelligence.". Sixth Doctoral Symposium on Intelligence Enabled Research (2025).
- [4] Heba Askr, Farghaly, Heba Mamdouh, **Mamdouh M. Gomaa**, Enas Elgeldawi, Yaseen AMM Elshaier, Hassan Aboul Ella, Ashraf Darwish, and Aboul Ella Hassanien. " Exploring the Anticancer activities of Sulfur and Magnesium Oxide through Integration of Deep Learning and

Fuzzy Rough Set Analyses Based on the Features of Vidarabine Alkaloid." Scientific Reports (12/2024).

[5] **Mamdouh Gomaa**, Ashraf Darwish, and Aboul Ella Hassanien. "Metaverse-Aware Avatar Face Detection Model Using Deep Learning." In *International Conference on Advanced Intelligent Systems and Informatics*, pp. 159-169. Springer, Cham, 2024.

[6] Askr, Heba, **Mamdouh M. Gomaa**, Rizk M. Rizk-Allah, Vaclav Snasel, and Aboul Ella Hassanien. "Prediction of methane emission and electricity generation from landfills: Deep learning approach." *Energy Reports* 12 (2024): 5462-5472.

[7] Farghaly, H.M., **Mamdouh M. Gomaa**, Hassanien, A.E. Towards Sustainable and Green Agriculture: Integrating Machine Learning and Fuzzy Rough Set Analysis to Enhance Fruit Classification and Ripeness Detection. In: Hassanien, A.E., Darwish, A., Elghamrawy, S.M. (eds) Artificial Intelligence for Environmental Sustainability and Green Initiatives. Studies in Systems, Decision and Control, vol 542, 2024. Springer, Cham. https://doi.org/10.1007/978-3-031-63451-2_6.

[8] **Mamdouh M. Gomaa**, Zain elabdeen, A.G., Elnashar, A. and Zaki, A.M. Brain tumor X-ray images enhancement and classification using anisotropic diffusion filter and transfer learning models. *International Journal of Information Technology*, pp.1-9, 2024.

[9] Moheb R. Girgis, Marina Esam, **Mamdouh M. Gomaa**, " Automated Extractive Text Summarization using Genetic and Simulated Annealing Algorithms and their Hybridization", *International Journal of Computer Applications*. Volume 185, Number 33, 2023.

[10] **Mamdouh M. Gomaa**, Alaa Elnashar, Mahmoud M. Eelsherif, and Alaa M. Zaki," Face Mask Detection Model Using Convolutional Neural Network", *Machine Learning and Applications: An International Journal* Volume 10, 2023.

[11] Awany Sayed, **Mamdouh M. Gomaa** , Mostafa Medhat Nazier, "Sentiment Analysis on Twitter's Big Data Against the Covid19 Pandemic Using Machine Learning Algorithms", *Information Sciences Letters An International Journal*, No. 8, P. 2747-2756 ,2023.

[12] Farghaly, Heba Mamdouh, **Mamdouh M. Gomaa**, Enas Elgeldawi, Heba Askr, Yaseen AMM Elshaier, Hassan Aboul Ella, Ashraf Darwish, and Aboul Ella Hassanien. "A deep learning predictive model for public health concerns and hesitancy toward the COVID-19 vaccines." *Scientific Reports* 13, no. 1 (2023).

- [13] Heba Askr, Enas Elgeldawi, Heba Aboul Ella, Yaseen A. M. M. Elshaier, **Mamdouh M. Gomaa**, Aboul Ella Hassanien, Deep learning in drug discovery: an integrative review and future challenges, Artificial Intelligence Review, (2022). <https://doi.org/10.1007/s10462-022-10306-1>.
- [14] **Mamdouh M. Gomaa**, Eman R. Mohamed, Alaa M. Zaki & Alaa Elnashar, Deep Learning to Detect Image Forgery Based on Image Classification, Journal of System and Management Sciences Vol. 12 (2022) No. 6, pp. 454-467 DOI:10.33168/JSMS.2022.0628
- [15] Amr M. El Koshiry, **Mamdouh M. Gomaa**, Entesar H. I., Tarek Abd El-Hafeez, "Using Machine Learning Techniques for Earthquake Prediction through student learning styles". 6th International Conference on Advanced Computing and Intelligent Engineering (ICACIE 2021), 23 December 2021.

INSTITUTIONAL PROFESSIONAL DEVELOPMENT ACTIVITIES IN THE LAST FIVE YEARS

- October 2017 till February 2025: member of Quality Assurance Unit – Faculty of Science – Minia University.
- October 2017 till February 2025: Academic advisor for students-Computer Science Department- Faculty of Science – Minia University.

RESEARCH LINK (Scopus and Google Scholar)

- **Scopus**
<https://www.scopus.com/authid/detail.uri?authorId=57940121000>
- **Scholar Link:**
<https://scholar.google.com.eg/citations?hl=en&user=bIRx-ksAAAAJ>
- **ResearchGate:**
https://www.researchgate.net/profile/Mamdouh-Gomaa-3?ev=hdr_xprf
- **ORCID:**
<https://orcid.org/0009-0000-4426-5965>

LANGUAGES

- English.
- Arabic.