Alaaeldin M. Hafez, Professor
IEEE Senior
ahafez@ksu.edu.sa; ahafez2001@yahoo.com
+966505295367
P.O.Box 51178 Riyadh 11543

Education:
- Ph.D. in Computer Science, Case Western Reserve University, Cleveland, Ohio, USA, 1989.
- M.Sc. in Computer Science, Faculty of Engineering, Alexandria University, Egypt, 1983.
- B.Sc. in Computer Science, Faculty of Engineering, Alexandria University, Egypt, 1977.

Current Activities:
- Department of Information Systems, College of Computer and Information Sciences, King Saud University, Riyadh, Saudi Arabia, 2004-current, Professor (full time).
- Department of Computer and Systems Engineering, Faculty of Engineering, Alexandria University, Egypt, Professor, 2002- current.
- Member of the Assessor Board of King Saud University Quality Management System KSU-QMS.
- ABET (Accreditation Board for Engineering and Technology)
- Member of the Executive Committee for the Institutional NCAAA at King Saud University
- Member of the IS department governance document preparation team.
- Consultant for several academic programs at the national level.
- Head of CCIS steering committee of Quality Management System KSU-QMS
- Member of CCIS steering committee of accreditation
- Member of IS Quality and Accreditation Committee
- Supervisor and Co-Supervisor of more than 80 Ph.D. and M.Sc. students
- Teaches several Ph.D. and M.Sc. graduate courses

Academic Experience:
- Department of Mathematics, Faculty of Engineering, Alexandria University, Teaching Assistant, 1977-1979, (full time).
- Department of Computer Sciences, Faculty of Engineering, Alexandria University, Teaching Assistant, 1979-1984, (full time).
- Department of Computer Science and Engineering, Case Western Reserve University, Ohio, USA, Research Assistant, 1985-1989, (full time).
- Department of Computer Sciences, Faculty of Engineering, Alexandria University, Assistant Professor, 1989-1995, (full time).

- Adjunct Professor at Institute of Public Health-Alexandria-Egypt, Air Defense Academy-Egypt, Arab Maritime Transport Academy-Egypt, and SADAT academy for management-Egypt
- College of Management Sciences and Planning, King Faisal University, Saudi Arabia, Assistant Professor, Acting Chairman of Computer Science Department, 1993-1998, (full time).
- Research Scientist, Center for Advanced Computer Studies (CACS), University of Louisiana at Lafayette, USA, 1998-2001, (full time).
- Department of Computer Sciences, Faculty of Engineering, Alexandria University, Associative Professor, 1996-2002, (full time).
- Department of Information Systems, College of Computer and Information Sciences, King Saud University, Professor, 2002 - Now, (full time).

Non-Academic Experience:
- ARABSQFT, Alexandria, Egypt, System Analyst, 1977-1979, part time.
- STANDARDATA, Alexandria, Egypt, System Analyst, 1979-1984, part time.
- STANDARDATA, Alexandria, Egypt, Software Consultant, 1989-1993, part time.
- Arabic Software Engineering, Egypt, Training consultant, 1989-1993, part time.
- The Egyptian Post Authority, Egypt, Data Warehouse Consultant, 2003-2004, part time.

Consultations:
- Computer Applications consultant at the Ministry of Transportation
- Reviewer of the Bachelor of Computer and Information Systems Curriculum – College of Computer and Information Sciences -Yamamah University
- Reviewer of the Bachelor of Science in Information Technology Curriculum – College of Computer and Information Sciences - Majmaah University
- Reviewer of the Bachelor of Science in Information Systems Curriculum – College of Computer and Information Sciences – Princess Nourah Bint Abdulrahman University

Current Membership in Professional Organizations:
- Senior Member IEEE
- Member of Editorial Board of Saudi Computer Society Journal
- Member of Egyptian Engineering Association

Honors and Awards:
- Best Paper Award, IEA/AIE 2000.

Patents
"CODE-BASED HASHING FOR MESSAGE AUTHENTICATION CODES", Docket No.: KSU.0133PTUS (PATENT), Application No.: 12/790,730, Confirmation No.: 1189

Brief List of the Most Important Publications:

- Hanan A. Hosni Mahmoud, Alaaeldin M. Hafez, E Alabdulkreem, "Language-Independent Text Tokenization Using Unsupervised Deep Learning", INTELLIGENT AUTOMATION AND SOFT COMPUTING 35 (1), 321-334, 2023
- AA Altameem, Alaaeldin M. Hafez, "Behavior Analysis Using Enhanced Fuzzy Clustering and Deep Learning", Electronics 11 (19), 3172, 2022
- Altameem, A. A., & Hafez, A. M. (2022). "Behavior Prediction Scheme using Hierarchical Clustering and Deep Neural Networks. Journal of Nanoelectronics and Optoelectronics. American Scientific Publisher,Vol 17,PP. 1-12 , 2022.
- AA AlArfaj, Hanan A. Hosni Mahmoud, Alaaeldin M. Hafez, "A Decoding Prediction Model of Flexion and Extension of Left and Right Feet from Electroencephalogram", Behavioral Sciences 12 (8), 285, 2022
- Hanan A. Hosni Mahmoud, NA Hakami, Alaaeldin M. Hafez, "An Intelligent Deep Learning Model for Adsorption Prediction", Adsorption Science & Technology 2022
- Hanan A. Hosni Mahmoud, AA AlArfaj, Alaaeldin M. Hafez, "A fast hybrid classification algorithm with feature reduction for medical images", Applied Bionics and Biomechanics 2022
- Hanan A. Hosni Mahmoud, Alaaeldin M. Hafez, "A Novel Optimized Language-Independent Text Summarization Technique", CMC-COMPUTERS MATERIALS & CONTINUA 73 (3), 5121-5136, 2022
- Hanan A. Hosni Mahmoud, NA Hakami, Alaaeldin M. Hafez, "An Intelligent Deep Learning Model for Adsorption Prediction", Adsorption Science & Technology 2022
- Abeer Abdulaziz AlArfaj, Hanan A. Hosni Mahmoud, and Alaaeldin M. Hafez, "A Deep Learning Model for Stroke Patients' Motor Function Prediction", Applied Bionics and Biomechanics, Volume 2022, 05 Aug 2022.
- Hanan Ahmed Hosni Mahmoud, Nada Ali Hakami, and Alaaeldin M. Hafez, "An Intelligent Deep Learning Model for CO2 Adsorption Prediction", Journal of Adsorption Science & Technology Volume 2022, 11 May 2022
- Hanan Ahmed Hosni Mahmoud, Abeer Abdulaziz AlArfaj, and Alaaeldin M. Hafez, "A Fast Hybrid Classification Algorithm with Feature Reduction for Medical Images", Journal of Applied Bionics and Biomechanics Volume 2022, 22 Mar 2022.
- Alsenan S, Al-Turaiki I, Hafez A. 2021, "A deep learning approach to predict blood-brain barrier permeability", PeerJ Computer Science 7e515 https://doi.org/10.7717/peerj-cs.515, June 10, 2021.
- S. A. Alsenan, I. M. Alturaiki and A. M. Hafez, "Auto-KPCA: A Two-step Hybrid Feature Extraction Technique for Quantitative Structure–Activity Relationship Modeling," in IEEE Access, Volume 9, Pages 2466-2477, January 2021.

- Shrooq A. Alsenan ; Isra M. Al-Turaiki and Alaaeldin M. Hafez, "A Recurrent Neural Network model to predict blood–brain barrier permeability", Computational Biology and Chemistry, Volume 89, December 2020.
- Shrooq A. Alsenan ; Isra M. Al-Turaiki and Alaaeldin M. Hafez, "Feature Extraction Methods in Quantitative Structure–Activity Relationship Modeling: A Comparative Study", IEEE Access, Vol.8, Issue 1, pages 78737-78752, Dec. 2020.
- Shrooq A. Alsenan ; Isra M. Al-Turaiki and Alaaeldin M. Hafez, "Autoencoder-based Dimensionality Reduction for QSAR Modeling", 2020 3rd International Conference on Computer Applications & Information Security (ICCAIS), 19-21 March 2020, Riyadh, Saudi Arabia, Saudi Arabia.
- Shrooq A. Alsenan ; Isra M. Al-Turaiki and Alaaeldin M. Hafez, "Chemoinformatics for Data Scientists: an Overview", iiWAS '20: Proceedings of the 22nd International Conference on Information Integration and Web-based Applications & Services, November 2020
- Alaaeldin Hafez and Hanan Mahmoud, "Novel Techniques for Noise-Tolerance in Combinational Critical-Path Circuit Components", International Journal of Innovative Technology and Exploring Engineering' Volume 9, Issue 4, February 2020
- Rawan Almutlaq and Alaaedin Hafez, "Detection Mechanism for Malicious Messages on KSU Student Social Network", International Journal on Data Science and Technology, Volume 6, Issue 1, March 2020, Pages: 23-36.
- Arwa Abdulaziz Altameem and Alaaeldin Hafez, "Hybrid Model for Prediction of Customers' Patterns Using Enhanced Fuzzy Clustering and Deep Learning", Technical Report January 2020.
- Arwa Abdulaziz Altameem and Alaaeldin Hafez, "Hybrid Model for Prediction of Customers' Patterns Using Enhanced Fuzzy Clustering and Deep Learning", Technical Report January 2020.
- Shrooq Alsenan, Isra Alturaiki and Alaaeldin Hafez, "Blood Brain Barrier Permeability: A Review for Data Scientists", Technical Report January 2020.
- Shrooq Alsenan, Aladdin Hafez, Isra Al-Turaiki, "The Effect of Dimensionality Reduction on a QSAR Predictive Model", 2nd RSC-BMCS / RSC-CICAG Artificial Intelligence in Chemistry, September 2019, Cambridge, United Kingdom.
- Sulaiman Alshehri and Alaaeldin Hafez, "Detection of Terrorism Actions in Social Networks (Twitter)", Technical Report December 2019.
- Asiyah alkaabi and Alaaeldin Hafez, "Measuring Student Understanding by Using Text Mining Techniques", Technical Report December 2019.
- Amina AlObaid and Alaaeldin Hafez, "SQL Injection Prevention System Using Input Validation Technique in Web Applications", Technical Report December 2019.
- Shrooq Alsenan, Isra Alturaiki and Alaaeldin Hafez, "A Deep Learning Approach to Predict Blood Brain Barrier Permeability", Technical Report 2018.
- Luluah Alhusain and Alaaeldin M. Hafez, "Nonparametric approaches for population structure analysis", Human Genomics. 2018; 12: 25.
- Noura Alzeer, Hessah Alsalamah, and Alaaeldin Hafez, "An Enhanced Approach for the Prioritisation in Patent Ductus Arteriosus (PDA) Services Using Data Mining

Techniques", eTELEMED 2018, The Tenth International Conference on eHealth, Telemedicine, and Social Medicine, March 25 – 29, 2018 Rome, Italy.

- Nora Ahmed Almezeini and Alaaeldin Hafez, "The Lion Cloud Optimizer ", International conference on Computer Applications & Information Security ICCAIS. 04-06 April 2018 Riyadh, Saudi Arabia.
- Luluah Alhusain and Alaaeldin Hafez, "Population Structure Analysis: A Review of Nonparametric Approaches", BioMed Research International (2017).
- Luluah Al-Husain and Alaaeldin Hafez, "Cluster Ensemble Based on Random Forests for Genetic Data", BioData Mining journal, 2017, 10:37.
- Luluah Alhusain and Alaaeldin M. Hafez. "Clustering Genetic Data: A Random Forest Cluster Ensemble Approach." 17th International Workshop on Data Mining in Bioinformatics (BIOKDD'2017) held in conjunction with the ACM SIGKDD 2017 conference, Halifax, Canada, August 12-18 2017.
- Nora Ahmed Almezeini and Alaaeldin Hafez, "Task Scheduling in Cloud Computing using Lion Optimization Algorithm", International Journal of Advanced Computer Science and Applications, Volume 8 Issue 11, 2017.
- Nourah F. Bin Hathlian and Alaaeldin M. Hafez, "Subjective text mining for Arabic social media", International Journal on Semantic Web and Information Systems (IJSWIS), Volume 13, Issue 2, (2017).
- Nourah F. Bin Hathlian and Alaaeldin M. Hafez, "Sentiment - Subjective Analysis Framework for Arabic Social Media Posts", 4th Saudi International Conference on Information Technology (Big Data Analysis) (KACSTIT), 6-9 Nov. 2016.
- Nora Almezeini and Alaaeldin Hafez, "An Enhanced Workflow Scheduling Algorithm in Cloud Computing", CLOSER 2016, 6th International Conference in Cloud Computing and Services Science", 23-25 April, 2016, Rome, Italy.
- Luluah Al-Husain and Alaaeldin Hafez, "A Novel Approach for Dimensionality Reduction of Genotypic Data", 2015 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology, August 12-15, Niagara Falls, Canada.
- Hussein Hashimi, Alaaeldin Hafez, Hassan Mathkour, "Selection criteria for text mining approaches", Computers in Human Behaviorm, Volume 51, Part B, October 2015, Pages 729– 733.
- Nouf M. Kh. Alsudairy, Alaaeldin M. Hafez, Vijay V. Raghavan, and Hassan I. Mathkour, "Candidate Graph Generation Algorithm", 9th International Conference on Computer Engineering and Applications (CEA '15), February 22-24, 2015.
- Jennifer Lavergne, Ryan Benton, Vijay Raghavan, and Alaaeldin Hafez, "DynTARM: An In- Memory Data Structure for Targeted Strong and Rare Association Rule Mining Over Time- Varying Domains", 2013 IEEE/WIC/ACM International Conference on Web Intelligence, Atlanta, USA, November 18-20, 2013.
- Amal Alsubaih, Alaaeldin Hafez and Khaled Alghathbar, "Authorization as a Service in Cloud Environments.", the 2nd International Symposium on Privacy and Security in Cloud and Social Networks (PriSecCSN 2013), in conjunction with IEEE Int. Conference on Cloud and Green Computing 2013 (CGC 2013), Sept. 30th- Oct. 2nd, 2013.

- Amal Alsubaih and Alaaeldin Hafez "Privacy Preserving Model in Semi-Trusted Cloud Environment", International Conference on Cloud Computing and eGovernance 2013 (ICCCEG 2013), Dubai, United Arab Emirates, 17 - 19, July 2013.
- Hussein Alhashimi, Alaaeldin Hafez, and Hassan Mathkour, "Selection Criteria for Text Mining Approaches", 6th World Summit on the Knowledge Society, Aveiro, Portugal June 19-21, 2013.
- Amal Alsubaih and Alaaeldin Hafez,"Privaciy Preserving Model in Semi Trusted Cloud Environment", The International Conference on Cloud Computing and eGovernance, ICCCEG 2013, June 2013.
- Abdelmonim M. Artoli, Hassan I. Mathkour, and Alaaeldin M. Hafez, "A Proposed Quality Assurance Intelligent Model for Higher Education Institutions in Saudi Arabia", 9th International Congress of quality management in education and training systems, December 2012.
- Abdelmonim M. Artoli, Hassan I. Mathkour, and Alaaeldin M. Hafez: A Proposed Quality Assurance Intelligent Model for Higher Education Institutions in Saudi Arabia. The Journal of Quality in Education, No. 3, 2012.
- Yasser Reyad, Ali El-Zaart, and Alaaeldin M. Hafez, "Mammograms Segmentation Using Log- Normal Distribution", 27th International Conference on Computers and Their Applications 2012 (CATA-2012).
- Hussein Hashimi, Alaaedin M. Hafez, and Mutaz Beraka, "A Novel View of Risk Management in Software Development Life Cycle", I-SPAN 2012, San Marcos, Texas, USA, December 2012.
- Bakheet Aldosari, Ghada Almodaifer, Alaaeldin Hafez and Hassan Mathkour, "Constrained Association Rules for Medical Data", Journal of Applied Sciences, 2012.
- Abdulkader A. Alfantookh, Hussam M. Ramadan, Alaa Eldin M. Hafez, Mourad, A. Ykhlef, Ahmad J. AlShibli, and Mourad A. Benchikh, "A Decision-Support System for the Saudi Ministry of Higher Education", International Journal of Computers and Their Applications (IJCA), Vol. 19, No. 4, Dec 2012.
- Abdullah M. Al-Faifi, Mohammed Rahhal, and Alaaeldin M. Hafez, "TAXONOMY AND SURVEY OF DATA MINING IN CLOUD COMPUTING", Science Series Data Report Vol 4, No. 8;Aug 2012.
- Ghada Almodaifer, Alaadin Hafez and Hassan Mathkour, "Discovering Medical Association Rules from Medical Datasets", IEEE International Symposium on IT in Medicine & Education ITME2011 , Guangzhou, China, December 9-11, 2011.
- Nouf M. Kh. Alsudairy, Vijay Raghavan, Alaaeldin M. Hafez and Hassan I. Mathkour, "Connection Subgraps: A Survey", Journal of Applied Sciences, 2011.
- H. Mahmoud, K. Alghathbar and A. Hafez, "A Novel Stegnosystem Design for Defying Differential Power Analysis Attacks on Smart Cards", Journal of Applied Sciences, Issue 6, Volume 11, 2011.
- R. Alosaimy, K. Alghathbar, A. Hafez, M. Eldefrawy "NMACA Approach Used to Build a Secure Message Authentication Code", International Conference on Security Technology (SecTech 2010), December 13 ~ 15, 2010. Jeju Island, Korea.

- H. Mahmoud, F. Bin Muhaya, and A. Hafez, "Lip Reading Based Surveillance System" . IEEE. AIMS, May 21-23, 2010, Korea.
- K. Alghathbar and A. Hafez "The Use of NMACA Approach in Building a Secure Message Authentication Code", International Journal of Education and Information Technologies, Issue 3, Volume 3, 2009.
- K. Alghathbar, A. Hafez, F. Muhaya, and H. Abdullah "NMACA: A Novel Methodology for Message Authentication Code Algorithms", 8th WSEAS Int. Conf. on Telecommunications and Informatics (TELE-INFO '09), Istanbul, Turkey, May 30 - June 1, 2009.
- H. Aboalsamh, A. Hafez, and G. Assassa, "An Efficient Stream Mining Technique," WSEAS Ttransactions on Information Sciences & Applications, Issue 7, Volume 5, July 2008, pp 1272-1281.
- M. Yakout, A. Hafez, and H. Aly "Mining Frequent Itemsets Using Re-Usable Data Structure," The 2007 International Conference on Data Mining (DMIN'07: June 25-28, 2007).
- S. Guirguis, K. Ahmed, N. El-makky, and A. Hafez "Mining The Future: Predicting Itemsets' Support of Association Rules," In Proc. of The 2006 IEEE International Conference on Data Mining (ICDM Workshops 2006), Hong Kong, Dec 2006.

The Most Recent Professional Development Activities:

- KSU – QMS Assessor Advanced Training.
- Improving Student Learning and Motivation, King Saud University.
- Teaching with Active Learning, King Saud University.
- Assessing Student Learning Outcomes, King Saud University.
- Quality Improvement in Teaching and Research, Alexandria University.