

Curriculum Vitae



• Personal Data

Title & Name: Associative Professor / Ahmed Rafat Abas Mohamed Salem

Birth Date: Jul. 23, 1971

Current Job: Associative Professor and Acting Head of Department of Computer Science – Faculty of Computers & Informatics - Zagazig University – Zagazig - Egypt

Marital Status: Married

Nationality: Egypt

e-mail: arabas@zu.edu.eg or ahmedrafat136@gmail.com

Web: <http://www.arsaliem.faculty.zu.edu.eg/>

<https://scholar.google.com.eg/citations?user=sAgvoTcAAAAJ&hl=en>

<https://orcid.org/0000-0003-4666-7751>

<https://www.scopus.com/authid/detail.uri?authorId=36098943300>

• Academic Degrees

1. **Associative Professor in Computer Science** – Supreme Council of Universities – Egypt – Aug. 2022.
2. **PhD. Degree in Computer Science** – School of Engineering, Computer Science and Mathematics – Exeter University - UK – Feb. 2005.
3. **MSc. Degree in Computer Engineering** - Faculty of Engineering - Cairo University – Egypt – Jan. 1999.

- 4. BSc. Degree in Electrical Engineering** – Excellent with Honor Degree -Faculty of Engineering - Zagazig University - Egypt - May 1993.

• Previous Jobs

1. Associative Professor and Acting Head of Computer Science Department

Faculty of Computers & Informatics – Zagazig University – Egypt - 4 Nov. 2024 up till now

2. Associative Professor

Artificial Intelligence Dept. - Faculty of Artificial Intelligence – Egyptian Russian University – Egypt – Feb. 1 – 31 Jul. 2024.

3. Associative Professor

Computer Science Dept. - Faculty of Computers & Informatics – Zagazig University – Egypt - 30 Aug. 2022 up till now.

4. Assistant Professor

Computer Science Dept. – College of Computer at AL-Lith – Umm Al-Qura University – Saudi Arabia - 11 Jan. 2011 – 9 Jun. 2015.

5. Assistant Professor

Computer Science Dept. - Faculty of Computers & Informatics – Zagazig University – Egypt - 31 May 2005 – 30 Aug. 2022.

6. Assistant Lecturer

Computer Science Dept. - Faculty of Computers & Informatics - Zagazig University – Egypt - 6 April 1999 : 30 May 2005.

7. Teaching Assistant

Computer Science Dept. - Faculty of Computers & Informatics - Zagazig University – Egypt - 22 November 1998 : 5 April 1999.

8. Researcher Assistant

Computers & Systems Dept. - Electronics Research Institute – Egypt - Oct 1994 : Dec 1998.

9. Assembly Language Programmer

Development Group Misr Co. – Egypt - Jan 22: Jun 13 – 1994.

• Publications

• Conferences

1. M. G. Mahdy, A. R. Abas, and T. M. Mahmoud, "Multi-phase Adaptive Competitive Learning Neural Network for Clustering Big Datasets". In: Hassanien A.E. et al. (eds) *Proceedings of the International Conference on Artificial Intelligence and Computer Vision (AICV2021)*. Settat, Morocco, 28-30 June 2021. *Advances in Intelligent Systems and Computing*, vol 1377, pp. 731-741, Springer, Cham. https://doi.org/10.1007/978-3-030-76346-6_65
2. A. R. Abas, "Incremental general regression with expectation maximization for learning finite mixtures using data with missing values", *Proceedings of the 2013 World Congress on Computer and Information Technology (WCCIT'2013)*, pp. 1-6, Sousse, Tunisia, 22-24 Jun. 2013.
3. A. R. Abas, "Using Particle Swarm Optimization and Locally-Tuned General Regression Neural Networks with Optimal Completion for Clustering Incomplete Data Using Finite Mixture Models", *Proceedings of the 12th International Arab Conference on Information Technology (ACIT'2011)*, vol. 2, pp. 333-341, Riyadh, Saudi Arabia, 11-14 Dec. 2011.
4. I. M. El-Henawy, A. H. Kamal, H. A. Abdelbary, and A. R. Abas, "Predicting Stock Index Using Neural Network Combined with Evolutionary Computation Methods", *Proceedings of the 7th International Conference on INFOrmatics and Systems (INFOS 2010)*, pp. 124-129, Cairo, Egypt, 28-30 Mar. 2010.
5. A. Rafat, "Locally Tuned General Regression for Learning Mixture Models Using Small Incomplete Data Sets with Outliers and Overlapping Classes", *Proceedings of the IDEAL 2004*, Exeter, UK, 2004, In: Yang, Z.R., Everson, R., and Yin, H. (Eds.), Springer-Verlag, LNCS 3177, pp. 774-779, 2004.
6. A. R. Appass, A. M. Darwish, A. I. El-Desouki, And S. I. Shaheen, "Speeding the Vector Search Algorithm for Regional Color Channel Features Based Indexing and Retrieval System", *Proceedings of the 12th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems*, Cairo, Egypt, May 1999.

• Journals

1. A. R. Abas, I. Elhenawy, M. Zidan, and M. Othman, "BERT-CNN: A Deep Learning Model for Detecting Emotions from Text," in *CMC-Computers, Materials & Continua*, vol.71, no. 2, pp.2943-2961, 2022, doi:10.32604/cmc.2022.021671.
2. A. R. Abas, M. G. Mahdy and T. M. Mahmoud, "Adaptive Landmark-Based Spectral Clustering for Big Datasets," in *IEEE Access*, vol. 9, pp. 88291-88300, 2021, doi: 10.1109/ACCESS.2021.3088295.
3. A. R. Abas, I. El-Henawy, H. Mohamed and A. Abdellatif, "Survey on Deep Learning Approaches for Aspect Level Opinion Mining," in *Journal of Cybersecurity and Information Management (JCIM)*, vol. 4, no. 1, pp. 46-66, Jul. 2020, doi: 10.5281/zenodo.3943130.

4. A. R. Abas, I. El-Henawy, H. Mohamed and A. Abdellatif, "Deep Learning Model for Fine-Grained Aspect-Based Opinion Mining," in IEEE Access, vol. 8, pp. 128845-128855, Jul. 2020, doi: 10.1109/ACCESS.2020.3008824.
5. A. M. El-Refaiy, A. R. Abas, I. M. El-Henawy, "Determining Extractive Summary for a Single Document Based on Collaborative Filtering Frequency Prediction and Mean Shift Clustering," IAENG International Journal of Computer Science, vol. 46, no. 3, pp. 494-505, Sept. 2019.
6. A. Elrefaiy, A. R. Abas, I. Elhenawy, "Review of recent techniques for extractive text summarization", Journal of Theoretical and Applied Information Technology, vol. 96, no. 23, pp. 7739-7759, Dec. 2018.
7. A. R. Abas, "Adaptive competitive learning neural networks", Egyptian Informatics Journal, vol. 14, no. 3, pp. 183-194, Nov. 2013.
8. A. R. Abas, "On determining efficient finite mixture models with compact and essential components for clustering data", Egyptian Informatics Journal, vol. 14, no. 1, pp. 79-88, Mar. 2013.
9. A. R. Abas, "Unsupervised learning of mixture models based on swarm intelligence and neural networks with optimal completion using incomplete data", Egyptian Informatics Journal, vol. 13, no. 2, pp. 103-109, Jul. 2012.
10. A. R. Abas, "Using Incremental General Regression Neural Network for Learning Mixture Models from Incomplete Data", Egyptian Informatics Journal, vol. 12, no. 3, pp. 185-196, Nov. 2011.
11. A. R. Abas, "An Algorithm for Unsupervised Learning and Optimization of Finite Mixture Models", Egyptian Informatics Journal, vol. 12, no. 1, pp. 19-27, Mar. 2011.
12. A. R. Abas, "An Incremental General Regression Neural Network for Missing Value Estimation", The Egyptian Computer Journal, vol. 37, no. 2, pp. 1-23, Dec. 2010.
13. A. R. Abas, A. A. Hefnawy, "Online speech to Arabic sign language translation system", Engineering Research Journal, vol. 128, pp. E15-E23, Dec. 2010.
14. A. R. Abas, "Using General Regression with Local Tuning for Learning Mixture Models from Incomplete Data Sets", Egyptian Informatics Journal, vol. 11, no. 2, pp. 49-57, Dec. 2010.
15. A. R. Appass, A. M. Darwish, A. I. El-Desouki, And S. I. Shaheen, "Image indexing using composite regional color channels features", The Egyptian Computer Journal, vol. 26, Dec. 1998. See also: Proc. SPIE, Storage and Retrieval for Image and Video Databases VII, vol. 3656, Jan. 1999.

• Books

1. A. Rafat, "An Adaptive Approach for Clustering Incomplete Data Sets: An Application To Health Inequality Analysis", Germany: LAP LAMBERT Academic Publishing AG & Co. KG, 2010. **ISBN:** 978-3-8383-0579-0
2. A. R. A. M. Salem, "Adaptive Mixture Models For Analysing Small, Sparse And Incomplete Data Sets; An Application To Health Inequality Analysis", PhD. Degree Thesis, Computer Science Department, School of Engineering, Computer Science and Mathematics, Exeter University, Exeter, UK, Feb. 2005.

3. A. R. Appass, “Image Indexing Using Regional Color Channels Features”, MSc. Degree Thesis, Computer Engineering Department, Faculty of Engineering, Cairo University, Egypt, 1999.

IS&T: The society of Imaging Science and Technology.

SPIE: The International Society for Optical Engineering.

IEA/AIE-99: The 12th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert System.

• MSc. Dissertations Supervised and Accredited

1. **Abdelbary H.A.H., August 2010**

Dissertation Title: Data Mining Using Neural Networks

University of Zagazig, Faculty of Computers & Informatics, Computer Science Dept.

2. **Abdelsalam H.M., July 2011**

Dissertation Title: Exact Moment Invariants: Computations and Applications

University of Zagazig, Faculty of Computers & Informatics, Computer Science Dept.

3. **El-Refaiy A.M., Sept. 2019**

Dissertation Title: Extractive Text Summarization by Machine Learning Techniques

University of Zagazig, Faculty of Computers & Informatics, Computer Science Dept.

4. **Mohamed H.R., 2020**

Dissertation Title: Aspect-based Opinion Mining

University of Zagazig, Faculty of Computers & Informatics, Computer Science Dept.

5. **Mahdy M.G., 2021**

Dissertation Title: Improving Pattern Recognition Using Intelligent Techniques

University of Zagazig, Faculty of Computers & Informatics, Computer Science Dept.

6. **Zidan M., 2022**

Dissertation Title: Emotion Detection from Text

University of Zagazig, Faculty of Computers & Informatics, Computer Science
Dept.

7. Fathy A, 2024

Dissertation Title: Deep Learning-based Tumor Detection in Medical Images

University of Zagazig, Faculty of Computers & Informatics, Computer Science
Dept.

• Journal Reviewer

1. Journal of Asia Pacific Management Review
2. Egyptian Informatics Journal
3. International Arab Journal for Informatics

• MSc. Dissertations Reviewer

No.	Title	Faculty / University	Category	Year
1	Artificial Intelligence Techniques for Computer Science Applications	Faculty of Computers and Informatics – Zagazig University	Computer Science – Artificial Intelligence	2024
2	Artificial Intelligence Techniques for Cybersecurity	Faculty of Computers and Informatics – Zagazig University	Computer Science – Artificial Intelligence	2024

• Teaching Experience

Since 2005 up till now, I have taught the following courses:

a. Undergraduate Level

1. Structured Programming with C++.
2. Data Structures and Algorithms with C++.
3. Object-Oriented Programming with C++.
4. Artificial Intelligence.
5. Computer Organization and Assembly Language Programming.
6. Parallel and Distributed Computing Systems.
7. Cryptography and Network Security.
8. Programming with C#.Net.
9. Computer Architecture
10. Discrete Mathematics
11. Computer Systems Security
12. Theory of Computations
13. Computer Systems Security
14. Neural Networks and Deep Learning
15. Artificial Intelligence in Health Care
16. Pattern Recognition
17. Handwriting Recognition

b. Post graduate Level

1. Neural Networks.
2. Advanced Cryptography and Computer Security.
3. Advanced Topics in Computer Science
4. Machine Learning

<ul style="list-style-type: none">• ABET Accreditation

Leading the Quality Assurance Committee in the College of Computer at AL-Lith, Umm Al-Qura University and fulfilling four criteria of the ABET self-study-report, Dec., 2014 - Apr., 2015.

<ul style="list-style-type: none">• Research

1. Artificial Intelligence
2. Pattern Recognition
3. Neural Networks
4. Data Mining
5. Text Summarization
6. Parallel Processing
7. Deep Learning
8. Sentiment Analysis
9. Emotion Detection
10. Tumor Segmentation in Medical Images
11. Big Data Mining
12. Human Computer Interaction

• Public Seminars

1. دور الطالب في الجودة و الاعتماد الأكاديمي. الكلية الجامعية بالليث ، جامعة أم القرى ، المملكة العربية السعودية ، ديسمبر/2011.
2. **Using Particle Swarm Optimization and Locally-Tuned General Regression Neural Networks with Optimal Completion for Clustering Incomplete Data Using Finite Mixture Models.** College of Computer science, Umm Al-Qura University, Saudi Arabia, Sept. 2012.

• Administrative Experience

1. Supervising the student athletic activities in the Faculty of Computers & Informatics – Zagazig University since 2005 - 2009.
2. Leading a team of teaching assistants and clerics to enter and review students' final exams results on the university web-based student affairs Information system in the Faculty of Computers & Informatics – Zagazig University in 2008.

3. Organising the weakly research seminar in the Faculty of Computers & Informatics – Zagazig University since 2008 - 2010.
4. Being a head of a control in the undergraduate level since 2008 - 2009.
5. Supervising a graduation project of a team of students who participates and wins the best project prize in the Windows 7 field of the Microsoft Egypt Imagine Cup Competition, 2009.
6. Supervising four graduation projects which are selected to receive funds from the Information Technology Industry Development Agency, Ministry of Information Technology and Communication, Egypt, 2009.
7. Being a director of the Information Technology Management education program for undergraduate students in the Faculty of Computers and Informatics at Zagazig University, in 2009.
8. Being a head of the electronic evaluation control for all undergraduate levels since 2018 – 2020
9. Being a head of the postgraduate control for all departments since 2019 – 2020.
10. Being a head of the crisis and disasters management unit since Mar. 2022 – Mar. 2023.
11. Acting head of the department of computer science since Nov. 2024 up till now.

1. Training Experience

1. System Analysis, Design, and Management with Computers.

Royal Scientific Society – Jordan - Mar : Aug 1995.

2. SPSS

Institute of National Planning – Cairo – Egypt – Jul. 1999.

3. TOEFL II English Course

American University in Cairo - Jan : Apr 2000.

4. Summer School on Pattern Recognition

British Computer Society - Exeter University – Exeter – UK - Jul. 28: Aug. 1, 2003.

5. University Teaching Skills

Zagazig University – Zagazig – Egypt – May 2005

6. Communication Skills

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Apr. 2005

7. Presentation Skills

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Apr. 2005

8. Course Preparation

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Apr. 2005

9. Introduction to Bioinformatics

Zagazig University – Zagazig – Egypt - 2009

10. Molecular Biology for Biologists (Advanced)

Zagazig University – Zagazig – Egypt – 2009

11. JAVA Programming (SE, EE, ME) Platforms

Hi-Q Academy for Learning Solutions (*Microsoft* Gold Certified Partner) – Zagazig - Egypt – 2009

12. Scientific Conference Organization

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Jul. 2011

13. International Publishing of Research

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Jul. 2011

14. The Credit Hour Systems

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Aug. 2011

15. Time Management

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Aug. 2011

16. Legal and Financial Aspects in University Environment

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Aug. 2011

17. Strategic Planning

Faculty and Leadership Development Centre - Zagazig University – Zagazig – Egypt – Aug. 2011

18. Test Banks & Electronic Marking

Evaluation & Assessment Centre - Zagazig University – Zagazig –
Egypt – Apr. 2017

19. Competitive Research Projects Preparation for research Funding

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Feb. 2022.

20. Electronic Learning

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Feb. 2022.

21. Articles and Theses judging

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Feb. 2022.

22. Scientific Conferences Organization

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Feb. 2022.

23. Credit Hours systems

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Feb. 2022.

24. Strategic Planning for Higher Education Institutions

National Agency for Quality Assurance and Accreditation of Education
(NAQAAE) – Egypt – Feb. 2022.

25. University Leaders Preparation (Department Head and Vice Dean)

Faculty and Leadership Development Centre - Zagazig University – Zagazig –
Egypt – Sep. 2024.

• IBM Certificates

1. Cloud Application Developer 2018 – Explorer Award for Educators, IBM, Jan. 24, 2018.

<https://www.youracclaim.com/org/ibm/badge/cloud-application-developer-2018-explorer-award-for-professionals>

2. Cloud Application Developer 2018 – Mastery Award for Educators, IBM - Jan. 24, 2018.
3. Big Data Engineer Explorer Award fir Students 2018, IBM, Jul. 4, 2019.
https://www.youracclaim.com/badges/d28fc502-a055-468d-9a44-33550e6fe00a/public_url
4. Big Data Engineer v2 Mastery Award for Students 2018, IBM - Jul. 4, 2019.
https://www.youracclaim.com/badges/4eb51af9-57bb-490a-9bc6-12e62a4876ea/public_url

• **Software Experience**

1. MS Windows & Office.
2. MS Visual Studio
3. FORTRAN, BASIC, PASCAL, ASSEMBLY, C++, Visual C++, C#, and JAVA.
4. MatLab.

• **Speaking Languages**

1. Arabic.
2. English.

• **Awards**

- **Excellency in Research Award**
Cairo University – Cairo – Egypt – 1999
- **Outstanding Performance in E-Learning Award**
Egyptian Russian University – Badr – Egypt - 2024