DINA ABDELHAFIZ

RESEARCHER

PERSONAL INFORMATION	Full Name: Affiliations: Address: Mobile No.: E-mail: Important links:	Dina Abdelhafiz Hussein Abdelhafiz Researcher at the City of Scientific Research and Technology Applications, (SARTA-City), Borg El-Arab, Alexandria, Egypt. 3 Army buildings, Mostafa Kamal, Alexandria, Egypt. +2-01000400353 dabdelhafiz@srtacity.sci.eg www.linkedin.com/in/dinaabdelhafiz https://github.com/Abdelhafiz
EDUCATION	**-Ph.D.,** Computer Science and Engineering. **May. 2020. GPA 3.93/4.00**. University of Connecticut, School of Engineering, Storrs, CT, USA. - **M.Sc**., Computer Science and Engineering. **June 2019.** University of Connecticut, School of Engineering, Storrs, CT, USA. -**M.Sc.**, Computer Science and Information technology. **July 2011. GPA: 3.8/4.00**. Alexandria University, Institute of Graduate Studies and Research, Alexandria, Egypt. **-Diploma,** System development. **2006-2007.** Ministry of Communication & Information Technology, Information Technology Institute (iTi), intake 27, Alexandria, Egypt. **-B.Sc.,** Communication and Electronics Engineering. **2006**. Grade: **Very good with degree of honor.** Alexandria University, School of Engineering, Alexandria, Egypt.	
ACTIVITIES	**Scientific Activities** • **University of Connecticut,** School of Engineering, Storrs, CT, USA. **2016-2019**. – The project aims at developing deep learning models for automated detection, segmentation, and classification of lesions in mammography. – This work is done in NabaviLab in cooperation with UCONN Health Center. – Programming languages used: MATLAB, Python, Tensorflow. • **Research assistance 2015-2020. University of Connecticut**, Computer Science and Engineering Department, Storrs, CT, USA.	

- **Teaching assistance 2016-2020**. University of Connecticut, Computer Science and Engineering Department, Storrs, CT, USA. Courses that I taught as teaching assistance:
  - **CSE 1010** (Introduction to computing for engineers), **Fall 2016, 2018; Spring 2018.**
  - **CSE 2100** (Data structures and object-oriented design). **Fall 2016**.
  - **CSE 3504** (Probabilistic performance analysis of computer Systems). **Spring 2017, 2019, Fall 2018.**
  - **CSE 3666** (Introduction to computer architecture). **Fall 2019**.
  - **CSE 4302** (Computer organization and architecture). **Spring 2016.**
  - **CSE 5095** (Probabilistic performance analysis of computer Systems). **Spring 2017.**
- **Assistant researcher. 2012-2020.**

  City of Scientific Research and Technological Applications (SRTA-City), District-New Borg ElArab, Egypt.
- **Communication and electronic engineer. 2008-2012.**

  City of Scientific Research and Technological Applications (SRTA-City), District-New Borg ElArab, Egypt.
- **Part time Instructor. 2008-2009.** Ministry of Communication & Information Technology, Information Technology Institute (iTi), Alexandria, Egypt. Courses I instructed: C, C++, C#, Java, Object oriented, Data structure with java, Web development, Mobile applications using C# and java.
- Participated in the 8th IEEE International Conference on Computational Advances in Bio and Medical Sciences, ICCABS 2018, Las Vegas, NV, USA. **October 18-20, 2018.**
- Participated in the IEEE International Symposium on Biomedical Imaging, ISBI 2018 in Washington D.C, USA. **April 4-7, 2018**.
- Participated in the 7th IEEE International Conference on Computational Advances in Bio and Medical Sciences, ICCABS 2017, Orlando, FL, USA. **October 19-21, 2017**.
- Participated in the Technology Day on Cloud Computing and Mobile Applications, Faculty of Engineering, Alexandria University, Alexandria, Egypt. **May 19, 2012.**
- Participated in the workshop on ”Scientific Writing for Publications”, University of Alexandria Research Center (UNARC), Alexandria, Egypt. **April 27-28, 2012**.
- Participated in the workshop on ”Technical Writing”, University of Alexandria Research Center (UNARC), Alexandria, Egypt. **May 4-5, 2011**.
- Participated in the 10th IEEE International Symposium on Signal Processing and Information Technology conference, Luxor, Egypt. **April 19-21, 2011.**
- Participated in the workshop, operation of RIEGL terrestrial laser scanner system ”RIEGLE LMS-Z620”, Horn, Austria. **Dec 15-18, 2010.**

- Online virtual participant, UPCRC Illinois Summer School for Multicore Programming and Parallel Processing. **April 2010.**
- Participated in the First International Forum on Next-Generation Multicore/Manycore Technologies IFMT'08 conference, Cairo, Egypt. **June 22-26, 2009.**
- Participated in the 7th Workshop on Ubiquitous Computing and Intelligence Information: Challenges and Solutions, Mubarak City for Science and Technology, Alexandria, Egypt. **Nov 24-25, 2008.**
- Internship, Advanced Systems Technology (AST) company, Alexandria, Egypt. -Internship, Integrated Solution for Ports (ISFP) company, Alexandria, Egypt. **Summer 2007, Spring 2007.**
- Participated in the Middle East Developer Conference (MDC), Cairo, Egypt. **2002-2006.**
- Internship, Barwil Egytrance company, Alexandria, Egypt. 2005. -Internship, the Company of Electricity, Alexandria, Egypt. **Summer 2005.**
- Workshop on "MATLAB programming", School of Engineering, Alexandria, Egypt. **Summer 2005.**
- Internship, Synergy Institute, Alexandria, Egypt. **Fall 2004.**
- Workshop on "Design & Implementation of Printed Circuits", School of Engineering, Alexandria, Egypt. **Summer 2004, 2005**.
- Internship, the Egyptian Company of Petrochemicals, Alexandria, Egypt.
- Internship, Company of Electricity, Alexandria, Egypt. **Summer 2003**.
- Internship, IT Department, Barwil Egytrance company, Alexandria, Egypt. **Summer 2002**.

Administrative Activities

Informatics Research Institute (IRI), City of scientific research and technology applications, Borg El-Arab, Alexandria, Egypt. **2008-2015**.

- I worked in several projects in the field of "Digital Cultural Heritage" in Egypt, including 3D scanning, 3D global registration, 3D documentation and virtual reconstruction of historical sites. I developed techniques that accelerate the pre-processing of scanned terrestrial 3D point cloud dataset.
- "Virtual Pyramid Plateau" and the "Virtual Luxor City", Egypt.
- 3D Documentation of temple of Seti-I, two statues of Memnon, Luxor city, Egypt.
- 3D Laser mapping of Kalabsha, Abo-el Reash, Aswan city, Egypt.
- Tools used: RiSCAN PRO, Geomagic studio 11, Geomagic Qualify 11, RIEGL 620 LMS terrestrial laser scanner. Programming languages used: C#.

Winter schools: Informatics Research Institute (IRI), City of scientific research and technology applications. Winter 2014-2015.

- Train students from the Alexandria University on scanning terrestrial plateaus using 3D laser scanner.

	• Train students on pre-processing and post-processing methods for 3D point cloud data-sets. • Train students developing 3D virtual tours.
	Extra-curriculum Activities Volunteer work to teach Arabic, Religion, and Islamic studies in the Islamic Center of Connecticut (ICUC), USA.
GRANTS & AWARDS	**Awards** • Scholarship from the Information Technology Institute (iTi), 9 Month Diploma Program, System Development department, intake 27, Alexandria, Egypt. 2006-2007. • Scholarship from the Egyptian Cultural and Education Bureau to pursue my PhD work in the United States at University of Connecticut, School of Engineering, Computer Science and Engineering department. The Egyptian government sponsors and fully supports me over four years. 2015-2018. • Predoctoral fellowship award from University of Connecticut, School of Engineering, Computer Science and Engineering department for outstanding scholarly and research accomplishments. Award earned at May 18, 2019. **Certificates**, online courses authorized by deeplearning.ai and offered through Coursera in: • Convolutional Neural Networks. • Neural Networks and Deep Learning. • Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization. • Structuring Machine Learning Projects. • AI for Medicine Specialization. • Natural Language Processing Specialization. • AI For Everyone.

LIST OF PUBLICATIONS	• **Abdelhafiz D,** Nabavi S, Ammar R, Yang C, Bi J, "Residual Deep Learning System for Mass Segmentation and Classification in Mammography," In 10th ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB '19), September 7–10, 2019, Niagara Falls, NY, USA.ACM, New York, NY, USA, 10 pages. • **Abdelhafiz D**, Yang C, Ammar R, Nabavi S. Deep convolutional neural networks for mammography: advances, challenges and applications. BMC bioinformatics. 2019 Jun;20(11):281. • **Abdelhafiz D**, Nabavi S, Ammar R, Yang C, Bi J. Convolutional Neural Network for Automated Mass Segmentation in Mammography. BMC bioinformatics. 2019-Accepted. • **Abdelhafiz D**, Nabavi S, Ammar R, Yang C, Bi J. Convolutional Neural Network for Automated Mass Segmentation in Mammography. In 2018 IEEE 8th International Conference on Computational Advances in Bio and Medical Sciences (ICCABS) 2018 Oct 18 (pp. 1-1). IEEE. • **Abdelhafiz D**, Nabavi S, Ammar R, Yang C. Survey on deep convolutional neural networks in mammography. In 2017 IEEE 7th International Conference on Computational Advances in Bio and Medical Sciences (ICCABS) 2017 Oct 19 (pp. 1-1). IEEE. • **Abdelhafiz D**, Nabavi S, Ammar R, Yang C; IEEE. The Effect of Pre-Processing on Breast Cancer Detection Using Convolutional Neural Networks. Poster session presented at the meeting of the IEEE International Symposium on Biomedical Imaging, Washington, DC. 2018. • **Abdelhafiz D**, Youssef BA, Sheta WM, Hassan HA. Interest point detection in 3d point cloud data using 3D sobel-harris operator. International Journal of Pattern Recognition and Artificial Intelligence. 2015 Nov 14;29(07):1555014 • **Abdelhafiz D**, Sheta WM, Bayoumi S, Youssef BA. A new approach for 3D range image segmentation using gradient method. Journal of Computer Science, Volume 7, Issue 4, Pages 475-487,2011.