Curriculum Vitae

Name: Soha Ahmed Ehssan Aly
E-mail address: dr.soha@fci.helwan.edu.eg
Marital status: Married
Gender: Female
Nationality: Egyptian
Linked in: www.linkedin.com/in/soha-a-ehssan

Education:

PhD, Cardiff University, UK. 2012-2016

School of Computer Science and Informatics, Cardiff University, United Kingdom
- Defense date: 31st October, 2016..
- Thesis title: " *SPATIOTEMPORAL USER AND PLACE MODELLING ON THE GEO-SOCIAL WEB*".

Master degree in Computer Science 2004-2009

Faculty of computers and information, Helwan University
- Defense date: 20th May 2009.
- Thesis title: "Steganographic Immunization for Digital Images".

Bachelor degree in Computer Science 1998-2002

Faculty of computers and information, Helwan University
- Grade: 85%.
- Excellent with honor and ranked 4th on the class.
- Bachelor Year Grade: Excellent.
- Graduation project grade: Excellent.

Secondary education certificate (high school) 1992-1998

Zaharat Language School, Heliopolis.
- Grade: 96%.

Primary education 1985-1989
Orman language School, Heliopolis.
El Sayteda Khadiga language School. 1989-1992

Current Work:

* Assistant professor, Faculty of Computers and Artificial Intillegence, Helwan University, Cairo, Egypt.

* External Examiner for MSA University, Cairo, Egypt and the university of Greenwich, London, UK(Sep-2021- Now).

*Topic Editor for Frontiers (Social Data Science: Using Social Networks Data for Social Impact)

Previous Work:

*Assistant professor, Faculty of computer studies, Arab Open University, Kuwait Branch. (Sep 2022-Jan 2023), then at Egypt branch (Feb 2023-Septemper 2023)

* Assistant professor at the Faculty of Computers and Artificial Intelligence, Computer Science Department, Helwan University, Cairo, Egypt. (2017-2022)

* Lecturer assistant at the Faculty of Computers and Artificial Intelligence, Computer Science Department, Helwan University, Cairo, Egypt(2007-2012)

* Teaching Assistant at the Faculty of Computers and Artificial Intelligence, Computer Science Department, Helwan University, Cairo, Egypt(2003,2007)

* Adjunct faculty at Arab Open University- AOU, Cairo, Egypt (2017-2022)

* Visiting researcher in data and knowledge engineering research group, school of computer science and Informatics, Cardiff University, UK. (November,2016- May, 2017). I worked on "Optimized Analysis of Spatio-Semantic data on Social Web" project.

* Worked between January 2017 and April 2017 on the project of "specifications of generalized and flexible developmental framework for embedding graduate/postgraduate attributes and employability skills, recording and transcribing achievements", funded by the Cardiff university center of education innovation.

* Part time Teaching/lab assistant in the school of computer science and informatic, Cardiff University, UK (April 2012 - May 2017). I did the labs for (Python, Assembly language, HTML, PHP, SQL, HCI and java programming), and I did Tutorials for (Problem Solving, Discrete mathematics)

* Part Time teaching assistant in College of Computing and Information Technology, Arab Academy for Science and Technology and Maritime Transport. (2003-2005)

* Java Trainer in Solution Plus Training Center.(2002)

Teaching interests:

Programming languages, Analysis & Design of Algorithms, Machine Learning, Image Processing, Artificial Intelligence and Web applications.

Research interests:

Geo-Social web analysis and modelling, recommendation models, natural language processing, data science, image processing, machine learning.

Thesis Supervision
I am currently supervising the following theses:
- A master thesis titled "**Sarcasm detection using Deep learning techniques.**"
- A master thesis titled "**Fake new detection using Deep Learning.**"
- A master thesis titled "**A framework for place safety conformance to health requirements from Social Media during pandemic.**"
-A master thesis titled "**Image Inpainting Detection and Localization.**"
- A PhD thesis titled "**Decentralized Security and Analytics for the IoT: A Unified Middleware Paradigm**."
-A PhD thesis titled "**Exploring the Cooperation of Quantum Computing and Machine Learning: Towards Enhanced Performance.**"

Publications:

Aly, S.A.E., Emara, O., Mahmoud, H. *et al.* Detecting image forgery: a deep learning framework with feature pyramid integration for inpainting detection. *Neural Comput & Applic* (2025). https://doi.org/10.1007/s00521-025-11461-6

Elshazly, M., Haggag, M.H. and Ehssan, S.A., 2021. A Depression Detection Model using Deep Learning and Textual Entailment. *International Journal of Computer Science and Information Security (IJCSIS)*, *19*(12).

Soha Ahmed Ehssan, Aya Hassanin, and Saddam Bekhet. "ESLDL: An Integrated Deep Learning Model for Egyptian Sign Language

Recognition." *2021 3rd Novel Intelligent and Leading Emerging Sciences Conference (NILES)*. IEEE, 2021.

Manar Elshazly, Mohammed Haggag and Soha Ahmed Ehssan, "Natural Language Processing Applications: A New Taxonomy using Textual Entailment" International Journal of Advanced Computer Science and Applications(IJACSA), 12(5), 2021. http://dx.doi.org/10.14569/IJACSA.2021.0120580

Mohamed, S. (2020). 'Medcare: An Ambulance Routing System', *FCI-H Informatics Bulletin*, 2(2), pp. 7-9. doi: 10.21608/fcihib.2020.115974

Ali, Abdalla Essam, Hala Abdel-Galil, and Soha Mohamed. "Quantum image mid-point filter." *Quantum Information Processing* 19.8 (2020): 1-23.

Mo'men Mohamed, Ahmed Magdy, Shymaa Hussein, Ahmed Samir, Hala Masoud, Hana Morsy, Soha Mohamed, 2019. *Twitter review analysis and sarcasm detection*. FCI-H Informatics Bulletin. Graduation project special issue.

Mohamed, Soha and Abdelmoty, Alia 2017. Spatio-semantic user profiles in location-based social networks. *International Journal of Data Science and Analytics*10.1007/s41060-017-0059-9

Mohamed, Soha and Abdelmoty, Alia 2016. Computing similarity between users on location-based social networks. *International Journal on Advances in Intelligent Systems* 9 (3&4) , pp. 542-553.

Mohamed, Soha and Abdelmoty, Alia 2016. Uncovering user profiles in location-based social networks. Presented at: *GEOProcessing 2016 : The Eighth International Conference on Advanced Geographic Information Systems, Applications, and Services*, Venice, Italy, 24-28 April 2016. *GEOProcessing 2016 : The Eighth International Conference on Advanced Geographic Information Systems, Applications, and Servi.* pp. 14-21.

Mohamed, Soha and Abdelmoty, Alia 2014. *Dynamic place profiles from geo-folksonomies on the geosocial web. Research and Development in Intelligent Systems XXXI*, Springer, pp. 239-251. (10.1007/978-3-319-12069-0_18)

Mohamed,Soha and Abdelmoty Alia 2012. Spatiotemporal Analysis of User-Generated Data on the Social Web. GIS Research Uk.

Mohamed, Soha, Belal Mohamed and Imam, Ibrahim, 2009. A Computational Immune Model for Detecting Stego Images. Egyptian Computer Science Journal, Volume 31, Number 3.