Ahmed H. Shahin

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EDUCATION

University College London

London, UK

PhD in Computer Science Mar. 2020 - Present

Nile University

MSc in Informatics; GPA: 3.93 Oct. 2017 - Dec. 2019

Mansoura University Mansoura, Egypt

BSc in Biomedical Engineering; GPA: 3.74 (Class Rank: 1st) Sept. 2012 - July. 2017

Experience

University College London

London, UK

Giza, Egypt

Email: ahmed.shahin.19@ucl.ac.uk

PhD Student Mar. 2020 - Present

o Supervisors: <u>Prof. David Barber</u> and <u>Prof. Daniel Alexander</u>

o Topic: Machine Learning for High-Resolution Lung Image Analysis

- Working on machine learning methods for the prognosis and diagnosis of Interstitial Lung Diseases from medical images and other clinical information.
- Full scholarship funded by the Open Source Imaging Consortium (OSIC)
- Participated in the organisation of the first OSIC Kaggle challenge for predicting Idiopathic Pulmonary Fibrosis progression Link
- Responsible for doing quality checks on the clinical data contributed by OSIC members to OSIC repository.
- Worked as a TA for COMP0090 (Introduction to Deep Learning) and COMP0016 (Systems Engineering) courses.

Data Science Systems

London, UK

Machine Learning Consultant

Oct. 2020 - Feb. 2021

• Supported a private project related to exploring AI methods for lung image analysis.

Intixel Cairo, Egypt

Senior Machine Learning Engineer

Nov. 2019 - Mar. 2020

Mar. 2019 - Aug. 2019

• Worked on developing deep learning algorithms for chest abnormalities detection and localization from X-Ray scans.

Inception Institute of Artificial Intelligence (IIAI)

Abu Dhabi, UAE

Research Intern

o Line manager: Dr. Shadab Khan

• Worked on weakly-supervised methods for class-agnostic image segmentation to alleviate data scarcity problem.

Nile University Giza, Egypt

Research Assistant

Oct. 2017 - Feb. 2019

- o Supervisor: Dr. Mustafa Elattar
- Worked on applications of deep neural networks in medical image segmentation and diagnosis.
- Taught CSCI304 Design and Analysis of Algorithms course for undergraduates.

Publications (no. of citations: 66)

- AH Shahin, J Jacob, D Alexander, D Barber, "Survival Analysis for Idiopathic Pulmonary Fibrosis using CT Images and Incomplete Clinical Data", Medical Imaging with Deep Learning Conference (MIDL'22) (Oral). Link
- AH Shahin*, S Khan*, J Shen, L Shao, "Extreme Points Derived Confidence Map as a Cue For Class-Agnostic Interactive Segmentation Using Deep Neural Network", International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'19). (early acceptance, travel award) Link
- AH Shahin, K Amer, MA Elattar, "Deep Convolutional Encoder-Decoders with Aggregated Multi-Resolution Skip Connections for Skin Lesion Segmentation", 2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI'19). Link
- AH Shahin, A Kamal, MA Elattar, "Deep Ensemble Learning for Skin Lesion Classification from Dermoscopic Images", 2018 9th Cairo International Biomedical Engineering Conference (CIBEC'18). Link

- AH Shahin, P Munjal, L Shao, S Khan, "FAIRS: Soft Focus Generator and Attention for Robust Object Segmentation from Extreme Points", Arxiv preprint. Link
- G Ali, AH Shahin, M Elhadidi, MA Elattar, "Convolutional Neural Network with Attention Modules for Pneumonia Detection", 2020 International Conference on Innovation and Intelligence for Informatics, Computing and Technologies (3ICT). Link

SCHOLARSHIPS AND AWARDS

- Full scholarship funded by OSIC for PhD at UCL, 2020.
- MICCAI Graduate Student Participation Award, Online, 2020.
- MICCAI Graduate Student Travel Award, Shenzhen, China, 2019.
- Full scholarship funded by Banque Misr for master's degree at Nile University, 2017.
- Partial scholarship from Mansoura University for outstanding academic performance, (2013 2017).

Volunteering

- Reviewer for the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'22).
- Reviewer for IEEE Access Journal.
- Reviewer for the International Journal of Computer Vision (IJCV).
- Reviewer for the Novel Intelligent and Leading Emerging Sciences Conference (NILES'19).
- Mentored an undergraduate intern at the centre for informatics sciences, Nile University.

SKILLS

- **Programming Languages**: Python (proficient), familiar with C++, Matlab.
- Machine Learning Libraries: PyTorch (proficient), TensorFlow, Scikit-learn.
- Languages: English (proficient), Arabic (native).