Ahmed Taha

Computer Science Department, University of Maryland, College Park 20740.
E-mail: ahmdtaha@umd.edu Phone Number: +1 (301) 256-6275
Website: http://www.cs.umd.edu/∼ahmdtaha/

Research Interests

Computer Vision, Deep Learning, Machine Learning, Artificial Intelligence.

Technical Skills

Python, Tensorflow, PyTorch, Keras, JAVA, MATLAB, mex files.

Education

University of Maryland GPA: 4.0 / 4.0 Sep 2015 - Present
Ph.D. Student in CS Advisor: Prof. Larry Davis, Abhinav Shrivastava

Arab Academy For Science And Technology Dec 2011 - Jan 2014
Master Degree in business Administration - MBA GPA: 3.83 / 4.0.

Alexandria University, Egypt GPA: 3.81/4.0 Sept 2004 - July 2009
B.S., Computer and Systems Engineering Ranked 8^{th}

Alexandria University, Egypt GPA 3.66/4.0 Sept 2011 - Aug 2015
Studied Mathematic Engineering. Advisor: Dr. Marwan Torki.

Publications

[C12] **Ahmed Taha**, Alex Hanson, Abhinav Shrivastava, Larry Davis.
★ SVMax: A Feature Embedding Regularizer.
arXiv, 2021

[C11] **Ahmed Taha**, Abhinav Shrivastava, Larry Davis.
★ Knowledge Evolution in Neural Networks.
Computer Vision and Pattern Recognition (**CVPR2021 Oral**)

[C10] **Ahmed Taha**, Xitong Yang, Abhinav Shrivastava, Larry Davis.
★ A Generic Visualization Approach for Convolutional Neural Networks.
European Conference on Computer Vision (**ECCV2020**)

[C9] **Ahmed Taha**, Yi-Ting Chen, Teruhisa Misu, Abhinav Shrivastava, Larry Davis.
★ Boosting Standard Classification Architectures Through a Ranking Regularizer.
Winter Conference on Applications of Computer Vision (**WACV2020**)

[C8] **Ahmed Taha**, Yi-Ting Chen, Teruhisa Misu, Abhinav Shrivastava, Larry Davis.
★ Unsupervised data uncertainty learning in visual retrieval systems.
arXiv, 2019.

Last update: March 2021

[C7] **Ahmed Taha**, Yi-Ting Chen, Xitong Yang, Teruhisa Misu, Larry Davis.
★ Exploring uncertainty in conditional multi-modal retrieval systems.
arXiv, 2019.

[C6] **Ahmed Taha**, Pechin Lo, Junning Li, Tao Zhao.
★ Convolution Networks for Kidney Vessels Segmentation from CT-Volumes.
International Conference on Medical Image Computing and Computer-Assisted Intervention (**MICCAI2018**)

[C5] Junning Li, Pechin Lo, **Ahmed Taha**, Hang Wu, Tao Zhao.
★ Segmentation of Renal Structures for Image-Guided Surgery.
International Conference on Medical Image Computing and Computer-Assisted Intervention (**MICCAI2018**)

[C4] **Taha, Ahmed** and Meshry, Moustafa and Yang, Xitong and Chen, Yi-Ting and Davis, Larry.
★ Two Stream Self-Supervised Learning for Action Recognition
Computer Vision and Pattern Recognition Workshop (**CVPRW2018**)

[C3] Rohan Chandra, Sachin Grover, Kyungjun Lee, Moustafa Meshry, **Taha, Ahmed**.
★ Texture synthesis with recurrent variational auto-encoder.
arXiv, 2017.

[C2] **Ahmed Taha**, Marwan Torki.
★ Seeded laplacian: An interactive image segmentation approach using eigenfunctions
IEEE International Conference on Image Processing (**ICIP2015**)

[C1] Moustafa Meshry, **Ahmed Taha**, Marwan Torki.
★ Multi-Modality Feature Transform: An Interactive Image Segmentation Approach.
The British Machine Vision Conference (**BMVC2015**).

Research Experience

[R5] [**2019 Honda Research Institute Internship**] Develop an interpretable video retrieval system for road-intersections scenarios. Mentor: Yi-Ting Chen.

[R4] [**2018 sponsored by Honda Research Institute**] Explore self-supervised learning, ego-motion action embedding, conditional and Bayesian retrieval uncertainty for autonomous navigation. Mentor: Yi-Ting Chen.

[R3] [**2017 Intuitive Surgical internship**] Develop robust algorithms to segment key anatomical structures from 3d volumetric images, in a fully automatic and semi-automatic fashion. Supervisor: Tao Zhao.

[R2] [**2016 Adobe Internship**] Develop a new selection\segmentation tool through patch matching. Supervisor: Stephen Schiller.

[R1] [2015] Develop an approached for solving interactive image segmentation problem. The approach supports different user annotation forms like scribble, trimaps, tight contour and bounding box. Advisor: Marwan Torki.

Awards and Honors

[AW9] WACV Doctoral Consortium Plus Travel Award 2020.

[AW8] Outstanding Teaching Assistant Award for AY 2019-20 (Awarded to 2%).

[AW7] Gifted unrestricted **2500$** from Adobe Systems, Inc.

[AW6] University of Maryland Graduate School Dean's Fellowship, 2015 and 2016

[AW5] Awarded **four** successive times in college for the Excellent grade.

[AW4] Passing round one in **Microsoft Imagine Cup contest 2008**.

[AW3] Graduate project is a winner in the **Information Technology Industry Development Agency's (ITIDA)** competition.

[AW2] Team has been chosen as one of the **Young Innovators' Awards(YIA)** Program winners for the academic year 2008/2009.

[AW1] Graduation project was chosen **2**nd **best graduate project** by Alexandria University for year 2008/2009.

Employment

Summer 2019	**Student Associate-Intern**	Honda Research Institute U.S.
Summer 2018	**Research Assistant**	University of Maryland
Summer 2017	**Medical Image / Machine Learning Intern**	Intuitive Surgical Inc
Summer 2016	**Emerging Graphics Group Intern**	Adobe Systems Inc

2011 - 2018 **Co-founder** Inova LLC
Managing software projects, negotiating with prospect clients, and marketing company's services.
Mobile Apps developed by Inova: Polar Scouts Feedbooks Free XSmoking

2010 - 2015 **Teaching Assistant** Faculty of Engineering, Alexandria University

2009 - 2010 **Software Engineer** Vimov LLC
Developing mobile apps for iOS and porting C games to iOS.
Ported Hexen II open source game from C to Objective C language to support iOS devices.

Summer 2018 **Software Development Intern** BadrIT
Developing mobile apps for iOS.

Summer 2017 **Software Development Intern** EasyDialog
Building website based on Enhydra server using JSP and servlet pages.

Teaching

Teaching Assistant — University of Maryland (8 Semesters)
- CMSC132 (Object-Oriented Programming II - Using JAVA)
- CMSC216 (Introduction to Computer Systems - Using C)
- CMSC420 (Data Structures - Using JAVA)
- CMSC426 (Computer Vision - Using PYTHON)

Languages: Arabic (Native Language), and English (Very Good)