Eid Alkhaldi, Ph.D.

Basic Info

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- E-Learning Visionary | Tech Enthusiast | Driven by Saudi Vision 2030
A passionate and dedicated educator with a strong background in artificial intelligence and STEM education. I'm deeply passionate about e-learning's potential to transform lives, a belief born from my own profound experiences with platforms like Coursera and DeepLearning.AI during my Ph.D. journey. With 8+ years specializing in machine learning and AI, my skills have grown alongside my dedication to education. Armed with a Ph.D. in Electrical Engineering, I'm well-versed in complex technological landscapes, having also mastered computer science and statistics. My mission is to bring this transformative power to the Saudi educational system, aligning perfectly with Saudi Vision 2030. My commitment to e-learning's possibilities and my proficiency in AI make me a valuable asset to any team with a similar mission. My ability to actively listen and understand the perspectives of my colleagues has consistently contributed to effective teamwork and problem-solving. I believe that strong team collaboration begins with attentive listening, and my commitment to this principle has led to successful projects and cohesive teams. Through my excellent listening skills, I aim to create an environment where every team member feels valued and heard.

Institutions

2017--2022	**Ph.D. in Engineering** *University of Toledo, Toledo, Ohio, USA* Focusing on medical image processing, Artificial Inteligence and Deep Learning. Advisor: Dr. Ezzatollah Salari.

Dissertation Title: ***Ensemble Optimization for Histological Image Classification***

2015--2017	**M.S. in Electrical Engineering** *University of Toledo, Toledo, Ohio, USA*
2014	**B.S. in Electrical Engineering** *Oklahoma State University, College of Engineering, Architecture and Technology* Stillwater, Oklahoma, USA

Publications

2022	**Ensemble Optimization for Histological Image Classification** *Dissertation, University of Toledo* Committee: Dr. Ezzatollah Salari, Dr. Kim, Junghwan,, Eddie Y. Chou, Ph.D., P.E., Dr. Richard G. Molyet.
Dec 2022	**E. Alkhaldi and E. Salari, ``Ensemble Optimization for Invasive Ductal Carcinoma (IDC) Classification Using Differential Cartesian Genetic Programming,'' in IEEE Access, vol. 10, pp. 128790-128799, 2022, doi: 10.1109/ACCESS.2022.3228176.** ***IEEE Access*** PDF *https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=arnumber=9978635*
2022	**Alkhaldi, E. & Salari, E. ``Ensemble Optimization Using Clonal Selection Algorithm for Breast Cancer Histology Image Classification''** *International Journal of Computer Science and Technology (IJCST) Vol. 13, Issue 4, Oct - Dec 2022* PDF *https://www.ijcst.com/vol12/issue1/3-eid-alkhaldi.pdf*
2021	**Alkhaldi, E. & Salari, E. ``Adaptive PSO-Based Ensemble Optimization for Histology Image Classification''** *International Journal of Computer Science and Technology (IJCST), Vol 12, Issue 1, Version Jan-March 2021.* PDF *https://www.ijcst.com/vol12/issue1/3-eid-alkhaldi.pdf*

2019	**Alkhaldi, E. & Salari, E. ``Genetically Optimized Heterogeneous Ensemble for Histological Image Classification"**
	International Journal of Science and Engineering Investigations (IJSEI), 8(95), 113-118. [PDF]
	http://www.ijsei.com/papers/ijsei-89519-16.pdf

Presentations

DEC 2022	**PhD Dissertation Defense**
	``Ensemble Optimization for Histological Image Classification"
APRIL 2022	**PhD Proposal Defense**
	``Ensemble Optimization for Histological Image Classification"
OCT 2021	**Optimized PhD Workflow Tutorial for UT grad students**
	``LaTex, BibTex, Mendeley and Emacs workflow for writing PhD dissertations"

Licenses & Certifications

2018	**Improving Deep Neural Networks: Hyperparameter Tuning, Regularization And Optimization** WWW
	Coursera, issued March 2018
2018	**Neural Networks and Deep Learning** WWW
	Coursera, issued February 2018

Languages

HUMAN	Arabic, English
MACHINE	Python, Matlab/GNU Octave, bash/shell, C, C++ , markup languages including LaTeX / XƎTEX, R Markdown, basic HTML.
DEEP LEARNING	PyTorch, TensorFlow, Keras, Fastai and Sikit-Learn
OTHER TOOLS	**OpenCV, MATLAB, DEAP (Genetic optimization framamework) , Linux**
	Excel, MS office

Research Interests

- Artificial Intelligence and STEM education
- Digital Image Processing, Signal Processing and Communication Systems
- Applications of Artificial Intelligence in Medical images, healthcare systems, Cybersecurity and Finance
- Machine Learning, Deep Learning, Data Science and Big Data
- Hyperparameter Tuning, Non-convex Optimiation, Numerical Methods and Biologically Inspired Computing

Public Code and Scripts

PUBLISHED	**Histology Image Classification models for ICIAR and IDC** ◉
	Various pretrained models for breast cancer detection in histology images. Achieved 88% accuracy on the ICIAR WWW *dataset*
PUBLISHED	**PhD Emacs** ◉
	Rich-featured and minimal Emacs configuration ideal for researchers and grad students

Engineering Projects

- UC Davis NATCAR Design Contest (Oklahoma State University 2014 team).

  - Responsibilities: ...
    * Microprocessor and interface with other blocks of the system
    * Design the power circuit for the whole system
    * Choosing the best value Battery that meet the project specs
    * The servo control software

Volunteering and Extracurricular activities

- MSA vice president (2011-2012)

- SSA member (2007 – 2012)

References

- **Dr. Ezzatollah Salari**
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