Eid Alkhaldi, Ph.D.

Basic Info

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- An exceptionally driven and seasoned AI Research Scientist with a profound background in pioneering AI and ML research and development. My unwavering passion lies in resolving complex real-world challenges through the creation of innovative AI solutions, underscored by a distinguished track record of articulating discoveries in the form peer-reviewed scientific papers

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 / X$\exists$TEX, 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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- **EDDIE CHOU, PhD, PE**
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- **WEIQING SUN, Ph.D.**
  Program Director of Master's Progams in Cyber Security
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