Eid Alkhaldi, Ph.D.

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https://github.com/alkhaldieid/cv/blob/master/cv.pdf PDF

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Basic Info

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- A passionate and dedicated educator with a strong background in artificial intelligence and STEM education. With over 10 years of experience in academia, I have had the privilege of working at the intersection of cutting-edge technology and innovative pedagogy. My academic journey, including a Ph.D. in Computer Science, has equipped me with a deep understanding of machine learning, deep learning, and generative AI. I am inspired by Saudi Arabia's Vision 2030 for education and its commitment to nurturing a future-ready workforce. My experience includes developing AI-driven educational content and fostering a culture of STEM excellence among students. I have a proven track record of designing curriculum that empowers learners with the skills needed to thrive in an AI-driven world. Having contributed to various STEM initiatives, I am excited about the opportunity to further the goals of Saudi Arabia's Vision 2030 by shaping the future of AI and STEM education in the Kingdom. My passion for equipping students with the knowledge and skills to excel in the digital age aligns perfectly with the transformative aspirations of this role.

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

In Progress | **Alkhaldi, E. & Alrwili M. ``AI-based efficient resources allocation for d2d 5G-Networks"**

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 / XeTeX, 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

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