# Eid Alkhaldi, Ph.D.

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 $https://github.com/alkhaldieid/cv/blob/master/cv.pdf \\ \fbox{PDF}$ 

(Last updated January 25, 2023.)

### **Basic Info**

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38a10212a/

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A passionate and collaborative Artificial Intelligence researcher and an Electrical Engineering Ph.D. graduate
from the University of Toledo, with a wealth of experience in designing accurate artificial intelligence and
Deep Learning models in various fields, including computer vision, diagnostic applications of Deep Learning
in medical imaging, breast cancer detection, intrusion detection systems, financial markets predictions, and
Al-based power allocation for 5G-Networks.

### 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, Okla-

homa, USA

Networks"

### **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 IDE 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 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.  http://www.ijsei.com/papers/ijsei-89519-16.pdf
In Progress	Alkhaldi, E. & Alrwili M. "Al-based efficient resources allocation for d2d 5G-

# **Presentations**

DEC 2022	PhD Dissertation Defense "Ensemble Optimization for Histological Image Classification"
April 2022	PhD Proposal Defense "Ensemble Optimization for Histological Image Classification"
Ост 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 $\Delta T_E X / X_B T_E X$ , R Markdown, basic HTML.
DEEP LEARNING		PyTorch, TensorFlow, Keras, Fastai and Sikit-Learn
Other Tools		OpenCV, MATLAB, DEAP (Genetic optimization framamework) , Linux

### **Research Interests**

- 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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Director, Transportation Systems Research Laboratory

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### • WEIQING SUN, Ph.D.

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