Eid Alkhaldi, Ph.D.

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Profile Summary

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- A Certified Professional Data Scientist with a Ph.D. in Electrical Engineering and over 8 years of specialized research in Artificial Intelligence (AI) and autonomous systems, contributing to advancements in image classification and CNN optimization. Published extensively in prestigious journals, including IEEE Access, with research that has influenced state-of-the-art methodologies.

  Entrepreneurial experience as an AI Consultant at NMK, an autonomous driving technology startup, leading AI-powered solutions and experimental environments for assisted driving systems. Successfully developed and implemented innovative systems that have enhanced product performance and team efficiency across academic and industry settings.

  Dedicated to leveraging AI expertise and certifications to drive digital transformation, operational excellence, and scalable solutions in various domains. Known for problem-solving, leading high-performing teams, and delivering measurable results.

Innovations and Publications

2024 | **Auto Report: Automated Reporting Tool**
GitHub Repository Developed and open-sourced a tool for automated generation of reports, designed to streamline data analysis and presentation. This tool allows users to pull data from multiple sources and create professional reports efficiently.

Published | **Histology Image Classification Models for ICIAR and IDC**
GitHub Repository Open-source pretrained models for breast cancer detection in histology images. Achieved 88% accuracy on the ICIAR dataset, demonstrating the practical application of AI in healthcare.

Published | **PhD Emacs Configuration**
GitHub Repository Released a minimal yet feature-rich Emacs configuration tailored specifically for researchers and graduate students to enhance productivity and workflow management.

Dec 2022 | **E. Alkhaldi and E. Salari, "Ensemble Optimization for Invasive Ductal Carcinoma (IDC) Classification Using Differential Cartesian Genetic Programming,"**
***IEEE Access**, vol. 10, pp. 128790-128799, 2022. doi: 10.1109/ACCESS.2022.3228176* PDF

2022 | **E. Alkhaldi and E. Salari, "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

2021 | **E. Alkhaldi and E. Salari, "Adaptive PSO-Based Ensemble Optimization for Histology Image Classification,"**
***International Journal of Computer Science and Technology (IJCST)**, vol. 12, issue 1, Jan-Mar 2021* PDF

2019 | **E. Alkhaldi and E. Salari, "Genetically Optimized Heterogeneous Ensemble for Histological Image Classification,"**
***International Journal of Science and Engineering Investigations (IJSEI)**, vol. 8, issue 95, pp. 113-118, 2019* PDF

Education

2017–2022 | **Ph.D. in Electrical Engineering**
University of Toledo, Toledo, Ohio, USA Specialized in medical image processing, Artificial Intelligence, and Deep Learning. Developed novel techniques for histological image classification using ensemble optimization. Advisor: Dr. Ezzatollah Salari.

Dissertation: *Ensemble Optimization for Histological Image Classification*

2015–2017 | **M.S. in Electrical Engineering**
University of Toledo, Toledo, Ohio, USA Focused on signal processing and machine learning applications. Key projects included the design of AI models for biomedical signal analysis.

2014 | **B.S. in Electrical Engineering**
Oklahoma State University, College of Engineering, Architecture and Technology, Stillwater, Oklahoma, USA Focusing on renewable energy and control engineering. Completed a senior design project on autonomous robotic systems competetion called NASCAR.

Work Experience

Aug 2024 – Present | **Deputy Site Manager**
Alhabib Trading Company, Construction and Engineering

- Managed on-site operations at King Abdulaziz Sports City, ensuring adherence to the highest standards of quality and safety, which improved project completion efficiency.
- Developed and implemented data-driven strategies that reduced operational delays by 15%, optimizing workflow across cross-functional teams.
- Introduced AI-based predictive maintenance and monitoring systems, improving project safety and minimizing equipment failure incidents.
- Automated the creation of daily progress reports using Python, leading to real-time project insights and faster decision-making processes for stakeholders.
- Mentored junior engineers, focusing on improving technical knowledge and promoting a continuous improvement culture, which enhanced team performance by 20%.

Academic and Research Experience

Jan 2017 – Dec 2022 | **Ph.D. Candidate in Electrical Engineering**
The University of Toledo

- Conducted groundbreaking research focused on ensemble optimization techniques for improving classification accuracy of histology images, leading to 4 peer-reviewed journal publications.
- Mentored two graduate students in research projects related to the application of AI in medical image classification, providing technical guidance and feedback on methodologies.
- Supported faculty in delivering lectures, facilitating lab sessions, and providing academic assistance to undergraduate and graduate students, improving student engagement and understanding of AI concepts.
- Collaborated with interdisciplinary teams on research involving AI and medical imaging, resulting in published work that has been cited in leading journals.
- Presented research findings at academic conferences, including defense presentations and external workshops.

Entrepreneurial Startup Experience

Feb 2023 – May 2024

Co-founder & Senior AI Consultant
NMK (Autonomous Driving Startup)

- Spearheaded AI research and development to enhance the performance of NMK's autonomous driving technology, resulting in the deployment of advanced safety features, including an Autonomous Emergency Stop system.
- Played a key role in strategic planning and roadmap development, which aligned AI-driven product features with market trends, increasing product adoption by 30%.
- Established an AI development environment and optimized workflows for model training and testing, improving team productivity by 40%.
- Secured partnerships with government agencies, including the Ministry of Transportation, expanding NMK's market reach and creating new revenue streams.
- Mentored junior AI engineers, fostering a collaborative culture focused on continuous learning and innovation.

Certifications Professional Development

2024

IBM Data Science Professional Certificate
IBM, issued Sep 2024

- What is Data Science?
- Tools for Data Science
- Data Science Methodology
- Python for Data Science, AI & Development
- Databases and SQL for Data Science
- Data Analysis with Python
- Data Visualization with Python
- Machine Learning with Python
- Applied Data Science Capstone

2018

Neural Networks and Deep Learning
Coursera & DeepLearning.AI, issued February 2018 www

2018

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization And Optimization
Coursera & DeepLearning.AI, issued March 2018 www

2024

Generative AI with Large Language Models
Coursera & DeepLearning.AI, issued Jan 2024 www

2024

Deploy a Hugo Website with Cloud Build and Firebase Pipeline
Google Cloud, issued April 2024 www

Languages

Human | Arabic, English

Machine | Python, Matlab/GNU Octave, bash/shell, C, C++ , markup languages including LaTeX / XeTeX, Markdown, basic HTML.

Deep Learning | PyTorch, TensorFlow, Keras, Fastai and Sikit-Learn

Other Tools | OpenCV, MATLAB, DEAP (Genetic optimization framamework) , Linux

References

References can be provided upon request to further attest to my qualifications and suitability for the role. Please feel free to reach out via email for further details.