Hüseyin Avni Yaşar

Machine Learning Engineer (M. Sc.)

Skills

Python 4+ Yrs.

Pytorch 3+ Yrs.

Tensorflow 3+ Yrs.

MATLAB 4+ Yrs.

Julia 1+ Yrs.

Biography

I am a machine learning engineer who work in harmony with other professions in an agile and collaborative environment.

- Strong background in physics and mathematics, with a focus on developing data-driven mathematical models and conducting statistical data analysis.

- Extensive experience in the fields of Machine Learning, Deep Learning, Physics Informed Neural Networks, and Optimization, utilizing programming skills in Python and Julia, and deep learning frameworks such as PyTorch and TensorFlow.

- Proven ability in algorithm development, numerical computations, and computational physics.

- Excellent communication skills, with a track record of communicating complex technical concepts to both technical and non-technical audiences.

Work experience

Machine Learning Engineer — **08/2021 - today**
ROKETSAN, Ankara, Turkey

- Developed and implemented machine learning models for various projects, utilizing Pytorch, Tensorflow, and Julia to develop physics-informed neural networks.
- Collaborated with interdisciplinary teams to solve complex problems.
- Published research results in peer-reviewed journals.
- Proficient in data analysis and modeling with Matlab and Python, as well as in researching and implementing Deep Neural Networks.
- Developed machine-learning-based solutions to augment physical simulations.

System Design Engineer — **08/2018 - 08/2021**
Roketsan, Ankara ,Turkey

- Development of design automation process for aerospace structures
- Presentation, justification, and reporting of design studies
- Participating in research and development projects
- Designing optimization algorithms and functional models
- Functional specification and integration
- Able to break down a large problem into manageable components

VLA Project Engineer - Part Time — **12/2017 - 02/2018**
Turkish Aerospace, Ankara ,Turkey

- Designed the Flight Control System of Very Light Aircraft Project.
- Conducted stress, thermal, and vibration analyses for mechanical systems.
- Utilized CAD software (CATIA) for designing and modeling assemblies.

Manufacturing Internship — **06/2016 - 07/2016**
Toyota Motor Manufacturing Turkey

- Traditional and modern manufacturing systems
- Geometric Dimensioning and Tolerancing (GD&T)
- Assembly line and processes

Language Skills

Turkish L1

English C1

German A2

Personal Skills

- Analytical thinking
- Organized
- Motivated
- Empathy
- Adaptability

Hobbies

- Playing Guitar
- Cycling
- Cooking

Contact

Ankara/Turkey

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Linkedin| Avni-Yasar

Education

Applied Mathematics (M.Sc.) 09/2019 - 02/2023
Middle East Technical University

Specialization in Machine Learning | Deep Learning
GPA 3.30 / 4.0
Supervisor: Assoc. Prof. Dr. Ercan Gürses
Thesis: Comparison of ANN-Based and Adaptive QNN-Based Multi-Fidelity Algorithms for Buckling Load Prediction of Stiffened Panel

Mechanical Engineering (B.Sc.) 09/2013 - 06/2018
Middle East Technical University

Engineering thinking, CAD-CAE programs for mechanical design & simulations, MATLAB-Python for developing algorithms
GPA 2.80 / 4.0

Publications & Awards

- **Manuscripts Under Review:**

  Huseyin Avni Yasar and E. Gurses, "Adaptive QNN-Based Multi-Fidelity Models for Buckling Load Prediction of Stiffened Panel: A Comprehensive Comparison with Traditional DNN Models," *Engineering Structures*, April 2023.

  U. Celik and Huseyin Avni Yasar, "Estimation of Ground-Based Atmospheric Turbulence Strength (C_n^2) by Novel QFNN Model," *Optics Letters*, March 2023.

Certificates

- **MIT Schwarzman College of Computing - Data Science and Machine Learning: Making Data-Driven Decisions:** Credential ID CRZNLWON, Issued Jan 2023.
- **Google - Crash Course on Python:** Credential ID XCVYJB36UUVG, Issued Apr 2021.
- **Wesleyan University - Python Programming: A Concise Introduction:** Credential ID 4GA4H7A5LSEY, Issued Mar 2018.
- **University of Michigan - Programming for Everybody (Getting Started with Python):** Credential ID JXT5EFZLRZTH, Issued Feb 2018.
- **Rice University - Susanne M. Glasscock School of Continuing Studies - Python Data Representations:** Credential ID ZHQQH4FV4W2W, Issued Feb 2018.
- **University of Michigan - Python Data Structures:** Credential ID LJCB247UBT33, Issued Feb 2018.
- **Rice University - Susanne M. Glasscock School of Continuing Studies - Python Programming Essentials:** Credential ID UKD7Z8ATRRUG, Issued Feb 2018.

Ankara, April 2023