Giorgos Papadakis

Applied Mathematician & Machine Learning Engineer

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Profile

A Mathematician / Machine Learning Engineer with a passion for Machine Learning, Data Science, and Teaching. Known for excellent communication skills, adaptability, and fast learning ability.

Skills

Technical Skills: Machine Learning, Deep Learning, Python, Tensorflow, PyTorch, sklearn, SHAP, R, Computational Mathematics.

Soft Skills: Organization, Communication, Impartiality, Problem Solving, Team Collaboration.

Experience

Machine and Deep Learning Engineer

2023 - Today

Creating machine learning solutions on interesting datasets. See more on my GitHub page.

Mathematics Teacher - Secondary Education School "BOLI"

2021 - Today

Teaching mathematics to primary and secondary school students. Also taught university-level statistics.

Education

Master's Degree in Data Science and Machine Learning

2021 - 2023

National Technical University of Athens (NTUA), School of Electrical and Computer Engineering Grade: 8.61 / 10

Thesis: Recognition of Cancer Tumors Using Deep Learning Techniques

- Developed and optimized UNet and Attention UNet models, achieving performance close to state-of-the-art benchmarks.
- Applied advanced image segmentation techniques and model evaluation metrics using TensorFlow and Keras.

Bachelor's Degree in Applied Mathematics

2016 - 2020

National and Kapodistrian University of Athens (NKUA), Department of Mathematics Grade: $7.50\ /\ 10$

Certifications

Machine Learning Explainability

2025

Certificate from Kaggle for successfully completing Machine Learning Explainability with Shap Library.

Time Series Analysis

2025

Certificate from Kaggle for successfully completing Time Series training with basic and hybrid models.

Machine Learning with Python: Zero to GBMs

2023

Certificate from Jovian, representing approximately 60 hours of coursework in machine learning.

Selected Projects

Stock Values Prediction:

- Designed basic models, like RNN, LSTM and GRU, but also and Hybrid Models that use the basic models and Segmentation Analysis on news headlines to predict the Close value of Microsoft stock.
- Achieved greate scores of \mathbb{R}^2 metric, with scores from the best models above 0.9.

Cancer Tumor Recognition System:

- Designed a deep learning system based on UNet and Attention UNet for image segmentation.
- Achieved close to state-of-the-art results in accuracy metrics.

Brain Tumor Classification with Transfer Learning:

- Designed a deep learning system based on Transfer Learning.
- Use of VGG16 as a backbone feature extractor Attention Layer for features enhance and Fully Connected Neural Network as head for the classifiction.
- Achieved close to state-of-the-art results in accuracy metrics.

PyTorch Tutorials:

- Collection of Jupyter Notebooks that cover the basics of Machine Learning.
- Implementations of Linear/Logistic Regression, Artificial Neural Network (ANN), Convolutional Neural Network (CNN), Recurrent Neural Network (RNN) and Long Short Term Memory (LSTM)

More projects are on the way...

Military Service

Fulfillment of Military Obligations

2020 - 2021

Served in Samos and Sparta as an infantry soldier with the qualifications of Holmist - General Duties.

Languages

Greek: Native

English: Advanced (C1 Level)

Hobbies

Reading: Books related to Data Science, Machine Learning, and Deep Learning.

Sports: Active athlete of Pankration and member of the Administrative Council of the National Federation of Pankration Athlima as athlete representative.