Kopalidis Thomas

Contact Details

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Skills

- Teamwork
- Adaptability
- Problem Solving
- Research
- Decision-Making
- Reliability
- Analysis
- Presentation Skills
- Public Speaking

Languages

Greek – Mother Tongue

English – C2 ECPE

French – B1 CCL

German – A1

Programming Languages

- Python
- R
- C
- Mathematica
- Matlab
- Microsoft Office
- SPSS
- Origin
- Git
- Flask
- MYSQL, SQL
- Pyspark
- SAS

Military Service

Fulfilled (Oct 2019 - June 2020)

Hobbies

Chess, Tennis, Walking, Gym, Travelling, Reading History Books

About Me

I hold a BSc in Physics and an MSc in Health Statistics and Data Analytics. I am a kind, patient, persistent, and altruistic person. I am interested in both research and teaching, and I believe that a great teacher should first be a great researcher. My research focuses on integrating AI in many fields such as in healthcare to improve patient outcomes, in environment, security, education, agriculture, industry to contribute to meaningful and impactful solutions that address global challenges.

Education

MSc in **Artificial Intelligence and Deep Learning**, Electrical & Electronics Engineering of University of West Attica (UNIWA), Athens, Feb 2025 – now

MSc in **Health Statistics and Data Analytics**, **Medical School** of Aristotle University of Thessaloniki, Feb 2022 - Jan 2024, Grade: "**Excellent**".

MSc Thesis on the "**Effect of short-term exposure to ambient temperature on pediatric hospital admissions in Athens**", Sep 2023 – Jan 2024.

BSc in **Physics**, **Science School** of Aristotle University Thessaloniki, Sep 2014 – July 2020, Grade: "**Very good**".

Working Experience

CERTH ITI

Sep 2024 – Feb 2025: Research Assistant and Data Scientist AI4HF

- Studying and working with Large Language Models (LLMs) combined with Machine Learning (Random Forest) to enhance AI-driven solutions.
- Enhancing the MAGGIC Risk Calculator for personalized mortality risk predictions in chronic heart failure patients.
- Developing an algorithm that:
  -Analyzes patient data.
  -Assigns a MAGGIC score based on predefined thresholds.
  -Provides tailored recommendations (for patients and doctors) based on medical guidelines and the bibliography.
- Improving risk stratification and clinical decision-making through data-driven insights.

Sep 2024 – Feb 2025: Research Assistant and Data Scientist AutoTRUST

- Conducting data analysis and developing CNN-based algorithms for anomaly and sound event detection in limited-resource settings. Searched and used CNN-based algorithms (e.g., MoViNets, X3D) for anomaly detection, focusing on speed and efficiency in limited-resource settings.

Jan 2024 – Feb 2025: Data Scientist and Backend Engineering UPPER

TES_08:

- Developing and integrating algorithms for various transportation modes (bus, car, walking, micromobility, shared car, multimodal trips).
- Implementing algorithms into a web application using Flask.

TES_10:

- Developing algorithms to validate user trips and identify transport modes using GPS data.

MSc Projects

1. I applied **statistical** models using **R**, including **fixed-effects**, **random-effects**.

2. I developed **machine learning** models using **Python** and **R** for **health data** such as **Alzheimer** Dataset and **Heart Failure Prediction** Dataset.

3. **MAGGIC Risk Calculator Enhancement**: Enhanced the MAGGIC Risk Calculator, a machine learning algorithm that provides personalized mortality risk predictions for chronic heart failure patients, improving risk stratification and treatment strategies.

Verified Certifications

- Accelerators and Detectors in Nuclear and Particle Physics
- Cell Biology: Mitochondria HarvardX
- Python
- The use of LASER in Medicine, Clinical Applications and Safe Operation
- Designing Lipid Nanoparticles Systems for COVID-19 Vaccines
- ECESCON12
- European Resuscitation Council
- Google Data Analytics Professional Certificate
- Microsoft Global Cert
- Machine Learning Certificates from London and Duke University
- Advanced Programming with Python.
- Honorary Distinction in School Mathematical Competition
- Information Security Fundamentals (CERTH)

May 2022 – Apr 2023: Research Assistant and Data Scientist REvalue

- Contributed to the REvalue project by implementing an online service providing data-driven real estate pricing advice.
- Collaborated to create a model to identify houses.
- Conducted research in graphs and transformers.
- Responsible for Deliverable 3.1.

May 2023 – Sep 2023: Research Assistant and Data Scientist INTREPID Citius Altius Fortius

- Worked on implementing machine learning models that supported data integration from UAVs with multiple sensors for environmental assessments.

May 2022 – Apr 2023: Research Assistant and Data Scientist TeNDER

- Actively engaged in the **TeNDER** project, focusing on deep learning methods for signal processing in patients with Parkinson's or Alzheimer's disease.
- Programmed using Pytorch to make the FER framework.
- Performed statistical analysis to assess intervention effectiveness by comparing pre- and post- intervention data evaluating impacts on health and quality of life.
- Integrated a model for Facial expression recognition (FER).
- Conducted Survey and research about FER.
- Responsible for Deliverables D3.3 and D4.2.
- Analyzed sensor data to detect patterns in disease progression for early symptom detection. Additionally, I examined population data to identify treatment response factors enabling personalized, optimized patient care.

Publications

Kopalidis, T.; Solachidis, V.; Vretos, N.; Daras, P. Advances in Facial Expression Recognition: A Survey of Methods, Benchmarks, Models, and Datasets. Information 2024, 15, 135. https://doi.org/10.3390/info15030135.

June 2019 - Sep 2020: Internship and Project – AHEPA University Hospital of Thessaloniki

My BSc **Internship** was in **Medical Physics** and **Data Analysis** at **AHEPA** University Hospital of Thessaloniki. I did my research in **spect imaging** "Applications of spect γ-Camera in the study of the effect of the acquisition radius on the semiquantitative measurements during brain striatum phantom spect imaging".

Dec 2018 - June 2019: Project in EMBS

Organizer in **EMBS** (**Engineering in Medicine and Biology Society**), University Team, AUTH, Thessaloniki.

Sep 2018 – Now: Teaching Experience

Teaching Physics, Mathematics, Biology, Chemistry and Informatics to Adolescents of Secondary School, High School, and Anatolia College.