Yorgos Felekis

yorgos.felekis@warwick.ac.uk | LinkedIn | Google Scholar | GitHub | Homepage

EDUCATION

PhD, Machine Learning Oct. 2022 – present
University of Warwick *Coventry, UK*

- Research Focus: Causality, Causal Representation Learning, Digital Twins
- Member of the Warwick Machine Learning Group

MSc, Machine Learning Sep. 2019 – Sep. 2020
University College London - UCL *London, UK*

- Degree awarded with Distinction
- Thesis:"Generalised Variational Inference posteriors in Probabilistic Deep Learning"

BSc, Mathematics Oct. 2014 – Jul. 2019
National and Kapodistrian University of Athens *Athens, GR*

- Degree awarded with First Class Honours

PUBLICATIONS

Causal Optimal Transport of Abstractions 2024

- **Felekis Y.**, Zennaro F.M., Branchini N., Damoulas T., *Causal Learning and Reasoning (CLeaR), 2024*

Causally Abstracted Multi-armed Bandits 2024

- Zennaro F.M., Bishop N., Dyer J., **Felekis Y.**, Calinescu A., Wooldridge M., Damoulas T., *under review for UAI 2024*

Interventionally Consistent Surrogates for Agent-based Simulators 2023

- Dyer J., Bishop N., **Felekis Y.**, Zennaro F.M., Calinescu A., Damoulas T., Wooldridge M. *arXiv preprint, 2023*

Probabilistic Deep Learning with Generalised Variational Inference 2022

- **Felekis Y.**, Damoulas T., Paige B., *4th Symposium on Advances in Approximate Bayesian Inference (AABI), 2022*

The generalized λ-Constant Function Market Makers 2022

- **Felekis Y.**, Kristensen J., *IEEE Blockchain, 2022*

Cryptocurrency price prediction with Multi-task Multi-step Sequence-to-Sequence Modeling 2022

- Kristensen J., Madrigal-Cianci J.P., **Felekis Y.**, Liatsikou M., *IEEE Blockchain, 2022*

ex-GPT: An Extractive-Abstractive Summarization Framework with a Sentence Embeddings Twist 2020

- Minto L., Kmec J., **Felekis Y.**, Filippi G., *preprint*

Deep Learning for Agricultural Land Detection in Insular Areas 2019

- Charou E., **Felekis Y.**, Bournou D., Maria Koutsoukou M., Panagiotopoulou A., Voutos Y., Bratsolis E., Mylonas P., Likforman-Sulem L., *10th International Conference on Information, Intelligence, Systems and Applications (IISA), 2019*

EXPERIENCE

Research Engineer Dec. 2021 – Jul. 2022
Advanced Blockchain AG *Berlin, DE*

- Work on the intersection of Artificial Intelligence and Blockchain technology and the mathematical aspects of DeFi. Specifically, study of the Automated Market Makers' dynamics via Multi-agent Reinforcement Learning Simulations and Adversarial Learning.
- Organizer of the weekly Research seminar (paper reviews, invited talks, brainstorming sessions).

Machine Learning & Data Science Consultant Aug. 2021 – Dec. 2021
Ernst & Young (EY) *Athens, GR*

- Work on AI-related platforms and technologies with a focus on Natural Language Processing and Natural Language Understanding at the IBM TechHub of EY. In particular, the work was focused on Text Classification, Document Retrieval, QA, and summarization tasks.

Machine Learning Engineer
LangAware

Jan. 2021 – Jun. 2021

Athens, GR

- Design and develop productised and deployed machine learning models for predicting neurodegenerative diseases with Natural Language Processing techniques. Specifically, work on Dementia, Alzheimer and Parkinson's diseases.

Visiting Researcher
National Centre for Scientific Research "Demokritos"

Sep. 2019 – Sep. 2020

Athens, GR

- Mentoring and supervising internship projects of undergraduate students, as part of their BSc Diploma.

Research Scientist
National Centre for Scientific Research "Demokritos"

Dec. 2018 – Aug. 2019

Athens, GR

- Experimentation with Transfer Learning techniques with popular neural network architectures (AlexNet, ResNet, VGG16).
- Creation of a Sentinel-2A based dataset called "Ionio dataset" and training of a Convolutional Neural Network in order to classify Agricultural and Non-Agricultural land cover. (see publication below)
- Organise multiple workshops as the main speaker for students and researchers on Deep Learning techniques and their applications to Remote Sensing.

Research Intern
National Centre for Scientific Research "Demokritos"

Aug. 2018 – Dec. 2018

Athens, GR

- Literature review of SOTA Deep Learning models for remote sensing image processing and satellite imagery.

HONOURS & AWARDS

Turing AI Acceleration Fellowship   Oct. 2022 – Apr. 2026

Onassis Scholarship for Doctoral Studies   Oct. 2022 – Oct. 2025

TALKS & POSTERS

Causal Optimal Transport of Abstractions   May 2024
Algorithms & Computationally Intensive Inference Seminar   *University of Warwick, Coventry, UK*

Causal Optimal Transport of Abstractions   Apr. 2024
Stanford AI Lab   *Stanford University, Palo Alto, CA, USA*

Causal Optimal Transport of Abstractions (poster)   Apr. 2024
Causal Learning and Reasoning (CLeaR)   *UCLA, Los Angeles, CA, USA*

Bridging micro and macro causal realms   Dec. 2023
Warwick Postgraduate Colloquium in Computer Science   *University of Warwick, Coventry, UK*

Probabilistic Deep Learning with Generalised Variational Inference (poster)   Feb. 2022
4th Symposium on Advances in Approximate Bayesian Inference   *Virtual Event*

MSc Thesis Presentation   Jan. 2021
NCSR "Demokritos" Machine Learning seminar series   *NCSR "Demokritos", Athens, GR*

Machine Learning methods for satellite image processing   Jul. 2020
55th Summer School of NCSR "Demokritos"   *NCSR "Demokritos", Athens, GR*

Deep Learning for Agricultural Land Detection in Insular Areas   Jul. 2019
10th International Conference on Information, Intelligence, Systems and Applications   *University of the Peloponnese, Patras, GR*

Deep Learning trends & techniques   Sep. 2019
Computational Intelligence Lab seminar   *NCSR "Demokritos", Athens, GR*

Convolutional Neural Networks for Land Use Land Cover classification   May 2019
Computational Intelligence Lab seminar   *NCSR "Demokritos", Athens, GR*

SUPERVISION

Tanatip Timtong, BSc Computer Science Thesis   Jul. 2022 – Apr. 2023
co-supervise with Prof. Theo Damoulas @ University of Warwick   *Coventry, UK*

Mary Karatzoglidi, Research Internship   Sep. 2019 – Jan. 2020
co-supervise with Dr. Eleni Charou @ NCSR "Demokritos"   *Athens, GR*

Organization

Warwick Machine Learning reading group Jan. 2023 – present
Focus: Causal Inference, Robustness, Probabilistic Machine Learning *University of Warwick, Coventry, UK*

Three-day Hackathon Apr. 2023
Organized in collaboration with other Alan Turing Institute fellows *University of Cambridge, Cambridge, UK*

Computational Intelligence Lab seminar May. 2019 – Sep. 2019
Organized workshops, seminars and invited talks *NCSR "Demokritos", Athens, GR*

Conferences & Summer Schools

Mediterranean Machine Learning Summer School (2023)

Greek Stochastics (2022, 2024)

Cambridge ELLIS Machine Learning Summer School (2022)

Oxford Machine Learning Summer School (2020)

Athens Probability Colloquium (2017, 2018)

Athens Colloquium on Algorithms and Complexity (2016, 2017, 2018)

International Conference on Algorithms and Complexity (2017)

Technical Skills

Languages & Developer Tools: Python, Matlab, Julia, Git, Google Cloud Platform, IBM Watson
Libraries: PyTorch, Keras, Scikit-learn, Pandas, NumPy, Matplotlib

Languages

Greek: Native **English**: Fluent **French**: Intermediate **Spanish**: Beginner