Yorgos Felekis

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

EDUCATION

Doctor of Philosophy (Ph.D.), Machine Learning　　　　　　　　　　　Oct. 2022 – present
University of Warwick　　　　　　　　　　　　　　　　　　　　　　　　　*Coventry, UK*
- Area: Causality, Causal Representation Learning, Digital Twins
- Advisor: Prof. Theodoros Damoulas
- Member of the Warwick Machine Learning Group

Master of Science (M.Sc.), 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"
- Area: Probabilistic Machine Learning, Bayesian Inference
- Advisors: Prof. Theodoros Damoulas and Prof. Brooks Paige

Bachelor of Science (B.Sc.), Mathematics　　　　　　　　　　　　Oct. 2014 – Jul. 2019
National and Kapodistrian University of Athens　　　　　　　　　　　　　*Athens, GR*
- Degree awarded with First Class Honours
- Specialization Area: Applied and Computational Mathematics

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
Advanced Blockchain AG

Dec. 2021 – Jul. 2022

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
Ernst & Young (EY)

Aug. 2021 – Dec. 2021

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

Fully funded PhD position

Oct. 2022 – Apr. 2026

- Awarded via the UKRI Turing AI Acceleration Fellowship:
  "Machine Learning Foundations of Digital Twins", awarded to Prof. Theodoros Damoulas

Onassis Scholarship for Doctoral Studies

Oct. 2022 – Oct. 2025

- Awarded in recognition of outstanding academic performance.

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