

Yorgos Felekis

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EDUCATION

Doctor of Philosophy (Ph.D.), Machine Learning <i>University of Warwick</i>	Oct. 2022 – present Coventry, UK
<ul style="list-style-type: none">Area: Causality, Causal Representation Learning, Digital TwinsAdvisor: Prof. Theodoros DamoulasMember of the Warwick Machine Learning GroupEnrichment student at the Alan Turing Institute (Oct. 2024 – Jun. 2025)Research internship at Spotify, London, UK (Jun. 2025 – Aug. 2025)	
Master of Science (M.Sc.), Machine Learning <i>University College London - UCL</i>	Sep. 2019 – Sep. 2020 London, UK
<ul style="list-style-type: none">Degree awarded with DistinctionThesis: “Generalised Variational Inference posteriors in Probabilistic Deep Learning” (Distinction)Area: Probabilistic Machine Learning, Bayesian InferenceAdvisors: Prof. Theodoros Damoulas and Prof. Brooks Paige	
Bachelor of Science (B.Sc.), Mathematics <i>National and Kapodistrian University of Athens</i>	Oct. 2014 – Jul. 2019 Athens, GR
<ul style="list-style-type: none">Degree awarded with First Class HonoursSpecialization Area: Applied and Computational Mathematics	

PUBLICATIONS

Distributionally Robust Causal Abstractions	2025
<ul style="list-style-type: none">Felekis Y., Damoulas T., Giampouras P., <i>arXiv preprint</i>	
Causal Abstraction Learning based on the Semantic Embedding Principle	2025
<ul style="list-style-type: none">D'Acunto G., Zennaro F.M., Felekis Y., Di Lorenzo P., <i>International Conference on Machine Learning (ICML)</i>, 2025	
Causal Optimal Transport of Abstractions	2024
<ul style="list-style-type: none">Felekis Y., Zennaro F.M., Branchini N., Damoulas T., <i>Causal Learning and Reasoning (CLeaR)</i>, 2024	
Interventionally Consistent Surrogates for Agent-based Simulators	2024
<ul style="list-style-type: none">Dyer J., Bishop N., Felekis Y., Zennaro F.M., Calinescu A., Damoulas T., Wooldridge M., <i>Neural Information Processing Systems (NeurIPS)</i>, 2024	
Causally Abstracted Multi-armed Bandits	2024
<ul style="list-style-type: none">Zennaro F.M., Bishop N., Dyer J., Felekis Y., Calinescu A., Wooldridge M., Damoulas T., <i>Uncertainty in Artificial Intelligence (UAI)</i>, 2024	
Probabilistic Deep Learning with Generalised Variational Inference	2022
<ul style="list-style-type: none">Felekis Y., Damoulas T., Paige B., <i>4th Symposium on Advances in Approximate Bayesian Inference (AABI)</i>, 2022	
The generalized λ-Constant Function Market Makers	2022
<ul style="list-style-type: none">Felekis Y., Kristensen J., <i>IEEE Blockchain</i>, 2022	
Cryptocurrency price prediction with Multi-task Multi-step Sequence-to-Sequence Modeling	2022
<ul style="list-style-type: none">Kristensen J., Madrigal-Cianci J.P., Felekis Y., Liatsikou M., <i>IEEE Blockchain</i>, 2022	
Deep Learning for Agricultural Land Detection in Insular Areas	2019
<ul style="list-style-type: none">Charou E., Felekis Y., Bourou D., Maria Koutsoukou M., Panagiotopoulou A., Voutos Y., Bratsolis E., Mylonas P., Likforman-Sulem L., <i>10th International Conference on Information, Intelligence, Systems and Applications (IISA)</i>, 2019	

EXPERIENCE

Research Intern	Jun. 2025 – Aug. 2025
<i>Spotify</i>	<i>London, UK</i>
• Work at the Advanced Causal Inference lab under the supervision of Dr. Ciarán Gilligan-Lee.	
Research Engineer	Jan. 2022 – Aug. 2022
<i>Advanced Blockchain AG</i>	<i>Berlin, DE</i>
• 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 Engineer	Aug. 2021 – Jan. 2022
<i>Ernst & Young (EY)</i>	<i>Athens, GR</i>
• 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	Jan. 2021 – Jun. 2021
<i>LangAware</i>	<i>Athens, GR</i>
• 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	Sep. 2019 – Sep. 2020
<i>National Centre for Scientific Research "Demokritos"</i>	<i>Athens, GR</i>
• Mentoring and supervising internship projects of undergraduate students, as part of their BSc Diploma.	
Research Scientist	Dec. 2018 – Aug. 2019
<i>National Centre for Scientific Research "Demokritos"</i>	<i>Athens, GR</i>
• 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.	
• Organise multiple workshops as the main speaker for students and researchers on Deep Learning techniques and their applications to Remote Sensing.	
Research Intern	Aug. 2018 – Dec. 2018
<i>National Centre for Scientific Research "Demokritos"</i>	<i>Athens, GR</i>
• Literature review of SOTA Deep Learning models for remote sensing image processing and satellite imagery.	

HONOURS & AWARDS

Alan Turing Institute Placement Award	Oct. 2024 – Jun. 2025
• Awarded as part of the Enrichment Scheme, to PhD students from across the UK to spend 9 months in the Alan Turing Institute.	
Fully funded PhD position	Oct. 2022 – Apr. 2026
• Awarded via the UKRI Turing AI Acceleration Fellowship [EP/V02678X/1]: "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.	

SUPERVISION

Luke Padmore, MSci Data Science Thesis	Oct. 2024 – Jul. 2025
<i>co-supervise with Prof. Theo Damoulas and Prof. Fabio M. Zennaro</i>	<i>University of Warwick</i>
Tanatip Timtong, BSc Computer Science Thesis	Jul. 2022 – Apr. 2023
<i>co-supervise with Prof. Theo Damoulas</i>	<i>University of Warwick</i>
Mary Karatzoglidi, Research Internship	Sep. 2019 – Jan. 2020
<i>co-supervise with Dr. Eleni Charou</i>	<i>NCSR "Demokritos"</i>

TALKS & POSTERS

From Patterns to Principles: Towards Causal and Scientific AI	Jun. 2025
<i>AI and Society symposium</i>	<i>University of Warwick, Coventry, UK</i>
Towards Causal Neuroabstractions	Feb. 2025
<i>NeuroAI seminar series</i>	<i>The Alan Turing Institute, London, UK</i>
Interventionally Consistent Surrogates for Complex Simulation Models (poster)	Dec. 2024
<i>Annual Conference on Neural Information Processing Systems</i>	<i>Vancouver, CA</i>
Causal Optimal Transport of Abstractions	Dec. 2024
<i>Causal Club reading group</i>	<i>University of Pisa, Pisa, IT</i>
Think, Reason and Learn in Multi-Scale Causal Systems	Nov. 2024
<i>CS & Stats PhD research seminar</i>	<i>University of Warwick, Coventry, UK</i>
Causal Optimal Transport of Abstractions	May 2024
<i>Algorithms & Computationally Intensive Inference Seminar</i>	<i>University of Warwick, Coventry, UK</i>
Causal Optimal Transport of Abstractions	Apr. 2024
<i>Stanford AI Lab</i>	<i>Stanford University, Palo Alto, CA, USA</i>
Causal Optimal Transport of Abstractions (poster)	Apr. 2024
<i>Causal Learning and Reasoning (CLeaR)</i>	<i>UCLA, Los Angeles, CA, USA</i>
Bridging micro and macro causal realms	Dec. 2023
<i>Warwick Postgraduate Colloquium in Computer Science</i>	<i>University of Warwick, Coventry, UK</i>
Probabilistic Deep Learning with Generalised Variational Inference (poster)	Feb. 2022
<i>4th Symposium on Advances in Approximate Bayesian Inference</i>	<i>Virtual Event</i>
MSc Thesis Presentation	Jan. 2021
<i>NCSR "Demokritos" Machine Learning seminar series</i>	<i>NCSR "Demokritos", Athens, GR</i>
Machine Learning methods for satellite image processing	Jul. 2020
<i>55th Summer School of NCSR "Demokritos"</i>	<i>NCSR "Demokritos", Athens, GR</i>
Deep Learning for Agricultural Land Detection in Insular Areas	Jul. 2019
<i>10th International Conference on Information, Intelligence, Systems and Applications</i>	<i>University of the Peloponnese, Patras, GR</i>
Deep Learning trends & techniques	Sep. 2019
<i>Computational Intelligence Lab seminar</i>	<i>NCSR "Demokritos", Athens, GR</i>
Convolutional Neural Networks for Land Use Land Cover classification	May 2019
<i>Computational Intelligence Lab seminar</i>	<i>NCSR "Demokritos", Athens, GR</i>

ORGANIZATION

Causal Abstractions and Representations workshop	Jul. 2025
<i>Workshop at the conference on Uncertainty in Artificial Intelligence (UAI)</i>	<i>Rio de Janeiro, BR</i>
Interdisciplinary AI and Society Symposium	Jun. 2025
<i>Social laws, social dynamics and concepts of society.</i>	<i>University of Warwick, Coventry, UK</i>
Physics-informed Machine Learning seminar series	Nov. 2024 – Jun. 2025
<i>Explores real-world applications of Φ-ML methods to the engineering practice.</i>	<i>The Alan Turing Institute, London, UK</i>
Advanced Topics in Machine Learning WMLG reading group	Jan. 2023 – Jan. 2025
<i>Focus: Causality, Robustness, Statistical Machine Learning.</i>	<i>University of Warwick, Coventry, UK</i>
Three-day Hackathon	Apr. 2023
<i>Causal discovery for cancer; Learning to run a power network; Low cost climate prediction</i>	<i>University of Cambridge, Cambridge, UK</i>
Computational Intelligence Lab seminar	May. 2019 – Sep. 2019
<i>Organized workshops, seminars and invited talks</i>	<i>NCSR "Demokritos", Athens, GR</i>

ACADEMIC SERVICE

- AAAI Conference on Artificial Intelligence
- Conference on Uncertainty in Artificial Intelligence (UAI)
- International Joint Conference on Artificial Intelligence (IJCAI-ECAI)

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

Italian: Beginner