Yorgos Felekis

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EDUCATION

PhD, Machine Learning — Oct. 2022 – present
University of Warwick — Coventry, UK
- Research Focus: Causal Inference, Digital Twins, Probabilistic Machine Learning
- Member of the Warwick Machine Learning Group

MSc, Machine Learning — Sep. 2019 – Sep. 2020
University College London - UCL — London, UK
- Degree awarded with Distinction

BSc, Mathematics — Oct. 2014 – Jul. 2019
National and Kapodistrian University of Athens — Athens, GR
- Degree awarded with First Class Honours

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 — Jan. 2021 – Jun. 2021
LangAware — 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 — Sep. 2019 – Sep. 2020
National Centre for Scientific Research "Demokritos" — Athens, GR
- Mentoring and supervising internship projects of undergraduate students, as part of their BSc Diploma.

Research Scientist — Dec. 2018 – Aug. 2019
National Centre for Scientific Research "Demokritos" — 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 — Aug. 2018 – Dec. 2018
National Centre for Scientific Research "Demokritos" — Athens, GR
- Literature review of SOTA Deep Learning models for remote sensing image processing and satellite imagery.

PUBLICATIONS

Probabilistic Deep Learning with Generalised Variational Inference   2022
- Felekis G., Damoulas T., Paige B., 4th Symposium on Advances in Approximate Bayesian Inference (link)

The generalized λ-Constant Function Market Makers   2022
- Felekis G., Kristensen J., IEEE Blockchain, 2022 (link)

Cryptocurrency price prediction with Multi-task Multi-step Sequence-to-Sequence Modeling   2022
- Kristensen J., Madrigal-Cianci J.P., Felekis G., Liatsikou M., IEEE Blockchain, 2022 (link)

Deep Learning for Agricultural Land Detection in Insular Areas   2019
- Charou E., Felekis G., Bournou D. et.al., 10th International Conference on Information, Intelligence, Systems and Applications, 2019 (link)

HONOURS & AWARDS

Turing AI Acceleration Fellowship	Oct. 2022 – Apr. 2026
Onassis Scholarship for Doctoral Studies	Oct. 2022 – Oct. 2025

TALKS & POSTERS

Optimal Transport for Causal Abstractions   Mar. 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*

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*

Machine Learning methods for satellite image processing   Jul. 2020
5th Summer School of NCSR "Demokritos"   *NCSR "Demokritos", Athens, 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 – present
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*

PROJECTS

Generalised Variational Inference posteriors in Probabilistic Deep Learning   May 2020 – Sep. 2020
- MSc Thesis and short presentation, awarded with Distinction. (link)

ex-GPT: A Summarization Framework   Feb. 2020 – Apr. 2020
- An Extractive - Abstractive Summarization Framework with a Sentence Embeddings Twist as part of the Natural Language Processing module during my MSc in Machine Learning. (link)

Cellular location prediction of proteins   Feb. 2020 – Mar. 2020
- Predicting the subcellular location of eukaryotic proteins using a Random Forest classifier. (link)

Neural Style Transfer for Remote Sensing Images   Sep. 2019 – Feb. 2020
- Work presented in 2nd Workshop on Remote Sensing and Space Applications on Geo-sciences and Geo-hazards of Geological Society of Greece

Conferences & Summer Schools

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