

Katarzyna (Kasia) Kobalczyk

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 📍 Trinity College, CB2 1TQ Cambridge, UK

PhD student in the Machine Learning and AI lab of Prof. Mihaela van der Schaar at the University of Cambridge. Research interests: meta-learning, probabilistic machine learning, foundational models.

EDUCATION

UNIVERSITY OF CAMBRIDGE PHD IN APPLIED MATHEMATICS AND THEORETICAL PHYSICS

2023 - 2027 (Expected) | Cambridge, UK

Research in Machine Learning and AI in the lab of Prof. Mihaela van der Schaar

UNIVERSITY OF CAMBRIDGE MAST IN MATHEMATICAL STATISTICS

2022 - 2023 | Cambridge, UK | Grade: Honours with Merit

Part III essay titled *Meta-learning for multimodal task distributions* supervised by Prof. Sergio Bacallado

UNIVERSITY OF WARWICK BSc IN MATHEMATICS AND STATISTICS

2019 - 2022 | Coventry, UK | Grade: First Class Honours

Ranked 1st in the Statistics student cohort; 92.5%, 89.3%, 89.4% yearly grade averages

AWARDS

WARWICK STATISTICS PRIZE | 2023

Awarded for the best overall performance in the Mathematics and Statistics degree

INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS (IMA) PRIZE | 2023

Awarded for an outstanding performance in mathematics-oriented subjects

OUTSTANDING ACADEMIC EXCELLENCE PRIZE | 2022

Awarded for the best 2nd year examination results in the Department of Statistics

WORK EXPERIENCE

CITADEL QUANTITATIVE RESEARCH INTERN

Summer 2023 | London, UK

- Developing and back-testing quantitative trading strategies for index rebalance
- Portfolio optimization with conic programming

G-RESEARCH SUMMER RESEARCH INTERN

Summer 2022 | London, UK

- Change-point analysis and anomaly detection for high-dimensional time-series data

SCHRODERS DATA INSIGHTS UNIT INTERN

Summer 2021 | London, UK

- Application of Bayesian item-response theory to survey data analysis
- Explainability and error sensitivity research in mean-variance portfolio optimisation

SHELL PLC DATA SCIENCE INTERN

Summer & Winter 2020 | London, UK

- Clustering analysis and decision tree learning for customer segmentation
- Modelling and analysis of traffic data with spatio-temporal networks
- Machine learning for fraud detection

PUBLICATIONS

- Katarzyna Kobalczyk and Mihaela van der Schaar. Informed Meta-Learning. 2024. arXiv: 2402.16105 [cs.LG]. In: ICML 2024 SPIGM and ICML 2024 MFHAIA workshops.
- Max Zhu et al. Tabular Few-Shot Generalization Across Heterogeneous Feature Spaces. 2023. arXiv: 2311.10051 [cs.LG] (preprint)
- Gareth Walley et al. "cegpy: Modelling with chain event graphs in Python". In: Knowledge-Based Systems 274 (2023), p. 110615. issn: 0950-7051. doi: <https://doi.org/10.1016/j.knosys.2023.110615>. url: <https://www.sciencedirect.com/science/article/pii/S0950705123003659>

SKILLS

PROGRAMMING LANGUAGES

Python, R, Stan, SQL, Bash, Matlab

FRAMEWORKS & PACKAGES

PyTorch, wandb, git, conda, Docker, PySpark, dask, Azure, Hugging Face, JAX

LANGUAGES

Native fluency:

English, Polish

Intermediate:

German