

Katarzyna Kobalczyk

CONTACT INFORMATION	 knk25@cam.ac.uk	Trinity College
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EDUCATION	University of Cambridge Cambridge, United Kingdom <i>PhD in Applied Mathematics and Theoretical Physics</i> Supervisor: Prof. Mihaela van der Schaar	Oct. 2023 - Jun. 2027 (expected)
	University of Cambridge Cambridge, United Kingdom <i>MASt in Mathematical Statistics (a.k.a. Part III)</i> Essay: <i>Meta-learning for multimodal task distributions</i> ; supervisor: Prof. Sergio Bacallado	Oct. 2022 - Jun. 2023
	University of Warwick Coventry, United Kingdom <i>BSc in Mathematics and Statistics, First Class Honours</i> Ranked 1st in the Statistics student cohort; 92.5%, 89.3%, 89.4% yearly grade averages	Sep. 2019 - Jul. 2022
AWARDS	<i>Warwick Statistics Prize</i> Awarded for the best overall performance in the Mathematics and Statistics degree.	Jul. 2022
	<i>Institute of Mathematics and its Applications (IMA) Prize</i> Awarded to a single student in the Department of Statistics for an outstanding performance in mathematics-oriented subjects.	Jul. 2022
	<i>Outstanding Academic Excellence Prize</i> Awarded for the best 2nd year examination results in the Department of Statistics.	Jul. 2021
RESEARCH EXPERIENCE	University of Cambridge , van der Schaar Lab Conducted research on i.a.: <ul style="list-style-type: none">- Meta-learning for few-shot learning with heterogenous tabular data- Bayesian methods for understanding human decision-making and knowledge acquisition.	
	Warwick Statistics , Student researcher Developed a Python package for Bayesian inference with Chain Event Graphs.	Oct. 2021 - Nov. 2022
	Warwick Statistics , Undergraduate Research Support Scheme Studied probabilistic graphical models; supervisor: Prof. J. L. Hutton.	Aug. - Oct. 2021
WORK EXPERIENCE	Citadel , London, United Kingdom <i>Quantitative Research Intern</i>	Jun. - Sep. 2023 (expected)
	G-Research , London, United Kingdom <i>Summer Research Intern</i> <ul style="list-style-type: none">- Change-point and anomaly detection in high-dimensional time series data.	Jun. - Sep. 2022

	<p>Schroders, London, United Kingdom Jul. - Aug. 2021 <i>Data Insights Unit Intern</i></p> <ul style="list-style-type: none"> - Bayesian item-response theory for the analysis of employee surveys - Explainability and error sensitivity research in mean-variance portfolio optimisation
	<p>Royal Dutch Shell, Cracow, Poland Dec. 2020 - Jan. 2021 <i>Off-cycle Data Science Associate</i></p> <ul style="list-style-type: none"> - Clustering analysis and decision tree learning for customer segmentation
	<p><i>Data Science Intern</i> Jul. - Sep. 2020</p> <ul style="list-style-type: none"> - Modelling and analysis of traffic data with spatio-temporal networks - Collaborative work on an automated fraud detection system based on machine learning methods for anomaly detection.
SOFTWARE & PROJECTS	<p>ceppy—Python package for Bayesian inference with Chain Event Graphs.</p> <p>onlineoceanarium—R package collecting examples of streaming algorithms for machine learning, statistics, and online decision-making.</p> <p>MonteCarloCasino—self-contained notebooks showcasing a range of Monte Carlo sampling methods implemented in Julia.</p> <p>mystatlearn—educational Python package for statistical learning and non-parametric statistics inspired by <i>The Elements of Statistical Learning</i> (Hastie et al. 2009).</p>
ACADEMIC ENGAGEMENT	<p>Warwick Data Science Society Apr. 2021 - Apr. 2022 <i>Research Lead</i></p> <ul style="list-style-type: none"> - Organised and supervised student-led interdisciplinary data science projects; edited and published the results on WDSS's research blog. - Led weekly <i>Papers & Code Club</i> reading group. <p><i>Education Officer</i> Sep. 2020 - Apr. 2021</p> <ul style="list-style-type: none"> - Managed and developed online coding courses and data science workshops. <p>Warwick Department of Statistics Aug. - Oct. 2021 <i>Statistics Education Project Officer</i></p> <ul style="list-style-type: none"> - Typeset lecture notes and exercise sheets for undergraduate courses in Statistics. <p><i>Student Staff Liaison Committee</i> Sep. 2021 - Jul. 2022</p> <ul style="list-style-type: none"> - Discussed ideas about teaching and student support with the University staff.
TECHNICAL SKILLS	<p>Languages: Python, R, Stan, Julia, MATLAB, SQL, Bash</p> <p>Libraries: Scipy stack, PyTorch, TensorFlow, JAX, NetworkX, PySpark</p> <p>Tools: Git, Conda, Docker</p>