Alberto Caron

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EXPERIENCE

Johnson & Johnson Innovative Medicine   Jan 2026 - Present
Research Scientist   *London, UK*

· Leading research projects on Bayesian Optimization of Biological Sequences and Causal Inference of Gene Regulatory Networks

The Alan Turing Institute   Jan 2025 - Jan 2026
Senior Research Associate   *London, UK*

· Led research projects in Probabilistic and Causal Sequential Decision-Making
· Mentored MSc research assistants and PhD interns, resulting in workshop/conference publications

The Alan Turing Institute   Apr 2023 - Jan 2025
Research Associate   *London, UK*

· Led research projects and collaborations on Bayesian uncertainty quantification methods in Model-Based Reinforcement Learning and Sequential Experimental Design

The World Bank Group   Sept 2022 - Jan 2023
Short-Term Researcher   *Washington DC, US (remote)*

· Short-term project on developing statistical models for internal elasticity of demand forecasts

University College London   Sept 2018 - Sept 2019
Research Assistant / Consultant   *London, UK*

· Led projects on applied Causal Inference with longitudinal data with Synthetic Control

Bocconi University   Mar 2018 - Sept 2018
Research Assistant   *Milan, Italy*

· Web scraping and data analysis of public tenders datasets.

EDUCATION

University College London   Sept 2019 - June 2023
Ph.D. in Statistics & Machine Learning   *London, UK*

· Dissertation: *Bayesian Learning in the Counterfactual World*

The Alan Turing Institute   Jan 2022 - Jul 2022
Enrichment PhD Student   *London, UK*

· Project on Causal Inference under Spatial Interference, funded by the Enrichment Scheme Award

Bocconi University   Sept 2015 - Dec 2017
M.Sc. in Statistics & Econometrics   *Milan, Italy*

· Dissertation: *Mixed-Data Sampling Bayesian Vector Autoregression.* Overall GPA: 28.43 / 30

Bocconi University   Sept 2012 - Sept 2015
B.Sc. in Economics   *Milan, Italy*

· Exchange Program at University of Gothenburg. Overall GPA: 27.16 / 30

SELECTED PUBLICATIONS

- Vyas, S., **Caron, A.**, Hicks, C., Burnap, P. & Mavroudis, V., *Beyond Training-Time Poisoning: Component-Level and Post-Training Backdoors in Deep Reinforcement Learning*, 2026, *Proceedings of the AAAI Conference on Artificial Intelligence*

- **Caron, A.**, Hicks, C. & Mavroudis, V., *On Efficient Bayesian Exploration in Model-Based Reinforcement Learning*, 2025, *Transaction on Machine Learning Research*, JMLR

- **Caron, A.**, Hicks, C. & Mavroudis, V., *Towards Causal Model-Based Policy Optimization*, 2025, *Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2025*

- Kolicic, B., **Caron, A.**, Hicks, C. & Mavroudis, V., *Inherently Interpretable and Uncertainty-Aware Models for Online Learning in Cyber-Security Problems*, 2024, *Workshop on Recent Advances in Resilient and Trustworthy Machine Learning, ACSAC 2024*

- Thompson, I., S., **Caron, A.**, Hicks, C. & Mavroudis, V., *Entity-based Reinforcement Learning for Autonomous Cyber Defence*, 2024, *ACM International Workshop on Autonomous Cybersecurity*

- Liang, X., **Caron, A.**, Livingstone, S. & Griffin, J., *Structure Learning with Adaptive Random Neighborhood Informed MCMC*, 2023, 37th *Conference on Neural Information Processing System*

- **Caron, A.**, Baio, G. & Manolopoulou, I., *Counterfactual Learning with Multioutput Deep Kernels*, 2022, *Transaction on Machine Learning Research*, JMLR

- **Caron, A.**, Baio, G. & Manolopoulou, I., *Interpretable Deep Counterfactual Learning for Moderation Effects*, 2022, 2nd *Interpretable Machine Learning for Healthcare Workshop, ICML*

- **Caron, A.**, Baio, G. & Manolopoulou, I., *Shrinkage Bayesian Causal Forests for Heterogeneous Treatment Effects Estimation*, 2022, *Journal of Computational & Graphical Statistics*

- **Caron, A.**, Baio, G. & Manolopoulou, I., *Estimating Individual Treatment Effects using Non-Parametric Regression Models: a Review*, 2022, *Journal of the Royal Statistical Society, Series A*

SKILLS

Software	Python (Pytorch, NumPyro, PyMC, CausalML, DoWhy, Scikit-learn), R, SQL, C++
Languages	Italian (Native), English, Spanish, French

AWARDS & CERTIFICATES

Mar 2022	Junior Travel Award, ISBA 2022 World Meeting
Jan 2022	Costas Goutis Prize for best PhD Upgrade Viva, UCL, Dept of Statistical Sciences
Sept 2021	Enrichment Students Award, The Alan Turing Institute
Jul 2021	11th Lisbon Machine Learning School, LxMLS 2021
Sept 2019	PhD Studentship, UCL, Dept of Statistical Sciences
Sept 2018	*Lino Venini* Scholarship, *BPN Fundation, Novara*
Jan 2015	*Erasmus+ Scholarship*

TALKS & REVIEWING ACTIVITY

Feb 2025	Invited Talk, Cambridge Biostats Seminars
Oct 2024	Poster, EWRL 2024
Dec 2023	Poster, NEURIPS 2023
Nov 2023/2024	Reviewer, AISTATS

Nov 2023	Invited Talk, Deepmind/ELLIS CSML Seminars
Jul 2022/2023/2024	Contributed Talks, Greek Stochastics
June 2022	Contributed Talk, ISBA World Meeting 2022, Montreal
Mar 2022	UCL, Dept Statistical Science, PhD Seminars
Apr 2021	UCL, Priment Clinical Trials Unit Statistical Seminar
Apr 2020	UCL, Dept Statistical Science, Computational Statistics Group