Daniel **Barrejón**

Universidad Carlos III de Madrid
Dpt. of Signal Theory and Communications
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Positions

Universidad Carlos III de Madrid   Oct. 2023 - present
Postdoc Researcher
Supervisor: Dr. Pablo M. Olmos

University of Amsterdam   Mar. 2022 - Jul. 2022
Visiting Researcher: Amsterdam Machine Learning Lab (AMLab)
Supervisor: Dr. Eric Nalisnick

Fundación UC3M   Dec. 2020 - Present
Course Instructor
Fundamentals, Advanced Machine Learning and Natural Language Processing courses
for BBVA employees.

Universidad Carlos III de Madrid   Oct. 2018 - Sept. 2019
Research Intern (Graduate): Group of Multimedia Processing
Research field: *Computer Vision.*

Universidad Carlos III de Madrid   Sept. 2017 - Feb. 2018
Research Intern (Undergraduate): Signal Theory and Communications.
Research field: *Bayesian Statistics for Signal Processing.*

Education

Universidad Carlos III de Madrid   Sept. 2019 - Oct. 2023
PhD in Machine Learning.
Advisors: Dr. Pablo M. Olmos and Dr. Antonio Artés.

Universidad Carlos III de Madrid   Sep. 2018 - Sept. 2019
M.Sc. in Multimedia and Communications.

Technische Universität München   Oct. 2016 - Aug. 2017
Program: *M.Sc. in Elektrotechnik und Informationstechnik.*
Erasmus Scholarship.

Universidad Carlos III de Madrid   Sept. 2014 - Sept. 2018
B.Sc. in Telecommunications Technologies Engineering.

Teaching

Universidad Carlos III de Madrid
T.A in Neural Networks (Bsc. in Data Science and Eng.)   2023
T.A in Machine Learning in Health (Bsc. in Data Science and Eng.)   2022
T.A in Systems and Signals (Bsc. in Biomedical Eng.)   2021, 2022
T.A in Linear Systems (Bsc. in Telecommunications Eng.)   2021
BBVA and Fundación Universidad Carlos III de Madrid
T.A in Advanced Machine Learning   2023
T.A in Machine Learning Fundamentals   2021, 2022, 2023
T.A in Natural Language Processing   2021, 2022, 2023

Projects

Deep-DARWiN   Sept. 2019 - Sept. 2021
Domain Alignment and Data Wrangling with Deep Generative Models.
Real-time highway object detection   Oct. 2018 - Sept. 2019
Computer vision project using Deep Learning.
Detection of behavioural changes in psychiatric patients. Daniel Barrejón.   Sep. 2017 - Oct. 2018
B.Sc. Thesis Dissertion

Summer schools	**Gaussian Process Summer School** (GPSS), University of Sheffield.	2020, 2021
	Nordic Probabilistic AI School (ProbAi), Norwegian Open AI Lab	2021
	Eastern European Machine Learning Summer School (EEML)	2021
	Machine Learning Frontiers in Precision Medicine (MLFPM).	2019, 2020

Publications

*Co-first authors. Order determined by coin flip.

Journals

D.Barrejón, Pablo M. Olmos, A.Artés-Rodríguez
Medical data wrangling with sequential variational autoencoders
In IEEE Journal of Biomedical and Health Informatics, 2021.

Peer-review Conferences

R. Verma*, D.Barrejón*, E. Nalisnick
Learning to Defer to Multiple Experts: Consistent Surrogate Losses, Confidence Calibration, and Conformal Ensembles
Artificial Intelligent and Statistics (AISTATS), 2023.

R. Verma, D.Barrejón, E. Nalisnick
On the Calibration of Learning to Defer to Multiple Experts
In ICML 2022 Workshop on Human-Machine Collaboration and Teaming, 2022.

D.Barrejón, Pablo M. Olmos, A.Artés-Rodríguez, **Temporal-hierarchical VAE for Heterogenous and Missing Data Handling**, Bayesian Deep Learning workshop @NeurIPS 2020, Poster presentation

Reviewing	International Conference on Learning Representations (ICLR)	2024
	XAI in Action: Past, Present and Future Workshop @NeurIPS	2023
	Deep Generative Models for Health Workshop @NeurIPS	2023
	Neural Information Processing Systems (NeurIPS)	2023
	International Conference on Machine Learning (ICML)	2023
	Artificial Intelligence and Statistics (AISTATS)	2023
	Advances in Approximate Bayesian Inference (AABI) @ ICML	2023
	Structured Probabilistic Inference & Generative Modeling (SPIGM) @ ICML	2023
	Multimodal Representation Learning (MLR) Workshop @ ICLR	2023
	I can't believe it's not better (ICBINB) Workshop @ NeurIPS	2022

Grants & Prizes	**Top reviewer** in *Neural Information Processing Systems (NeurIPS)*	2023
	Top 10% reviewer in *Artificial Intelligence and Statistics (AISTATS)*	2023
	Research Visit Grant, Universidad Carlos III de Madrid	2022
	FPU Grant to fund doctoral Studies, Spanish Ministry of Education	2020

Volunteering	Volunteer and attendant in *Artificial Intelligence and Statistics (AISTATS)*	2021, 2022
	Tutor for Linear Algebra in Universidad Carlos III de Madrid	2018
	Let's be friends with books: Erasmus + project in Iğdır, Turkey (19 Apr.- 26 Apr.)	2017

Languages

Spanish: Mother tongue.
English: Advanced User C1.
French: Upper Intermediate User B2.
German: Intermediate User B1.

Computer Skills

Python, Matlab, Java, C, Latex.
DL Frameworks: Pytorch, Tensorflow, Keras.
Others: OpenCV, Git, Inkscape, Logic Pro X, Ableton Live.

References

Dr. Pablo. M. Olmos, Universidad Carlos III de Madrid.
Dr. Antonio Artés-Rodríguez, Universidad Carlos III de Madrid.
Dr. Eric Nalisnick, University of Amsterdam.