

Daniel Barrejón

	PhD in Probabilistic Machine Learning <u>Research Scientist</u> @ Centric Software	Email: dbarrejo@ing.uc3m.es in: https://www.linkedin.com/in/dbarrejonmoreno Q: https://github.com/dbarrejon A: https://dbarrejon.github.io/
Positions	Centric Software <i>AI Research Scientist</i> Working on Generative AI with diffusion models and computer vision leveraging vision-language models and LLMs (Experience with: Stable Diffusion, CLIP, ViT, etc.)	Feb. 2024 - present
	Universidad Carlos III de Madrid <i>Postdoctoral Researcher</i> Supervisor: Dr. Pablo M. Olmos	Oct. 2023 - Feb. 2024
	Fundación UC3M <i>Course Instructor</i> Fundamentals, Advanced Machine Learning and Natural Language Processing courses for BBVA employees.	Dec. 2020 - Jan. 2024
	University of Amsterdam <i>Visiting Researcher:</i> Amsterdam Machine Learning Lab (AMLab) Supervisor: Dr. Eric Nalisnick Project: Learning to Defer to Multiple Experts	Mar. 2022 - Jul. 2022
	Universidad Carlos III de Madrid <i>Research Intern (Graduate):</i> Group of Multimedia Processing Research field: <i>Computer Vision</i> . Real-time object detection.	Oct. 2018 - Sept. 2019
	Universidad Carlos III de Madrid <i>Research Intern (Undergraduate):</i> Signal Theory and Communications. Research field: <i>Bayesian Statistics for Signal Processing</i> . Change-point detection.	Sept. 2017 - Feb. 2018
Education	Universidad Carlos III de Madrid <i>PhD in Probabilistic Machine Learning.</i> Advisors: Dr. Pablo M. Olmos and Dr. Antonio Artés.	Sept. 2019 - Oct. 2023
	Universidad Carlos III de Madrid <i>M.Sc. in Multimedia and Communications.</i>	Sept. 2018 - Sept. 2019
	Technische Universität München <i>M.Sc. in Elektrotechnik und Informationstechnik.</i> Erasmus Scholarship.	Oct. 2016 - Aug. 2017
	Universidad Carlos III de Madrid <i>B.Sc. in Telecommunications Technologies Engineering.</i>	Sept. 2014 - Sept. 2018
Teaching	Universidad Carlos III de Madrid <i>T.A in Neural Networks (Bsc. in Data Science and Eng.)</i>	2023
	<i>T.A in Machine Learning in Health (Bsc. in Data Science and Eng.)</i>	2022
	<i>T.A in Systems and Signals (Bsc. in Biomedical Eng.)</i>	2021, 2022
	<i>T.A in Linear Systems (Bsc. in Telecommunications Eng.)</i>	2021
	BBVA and Fundación Universidad Carlos III de Madrid <i>T.A in Advanced Machine Learning</i>	2023
	<i>T.A in Machine Learning Fundamentals</i>	2021, 2022, 2023
Projects	Deep-DARWiN @ Universidad Carlos III de Madrid Domain Alignment and Data Wrangling with Deep Generative Models.	Sept. 2019 - Sept. 2021
	Real-time highway object detection @ Universidad Carlos III de Madrid Computer vision project using Deep Learning, namely YOLOv3.	Oct. 2018 - Sept. 2019
	Detection of behavioral changes in psychiatric patients. Daniel Barrejón. B.Sc. Thesis Dissertation in Bayesian statistics for signal processing	Sept. 2017 - Oct. 2018

Summer schools	Gaussian Process Summer School (GPSS) , University of Sheffield. Nordic Probabilistic AI School (ProbAi) , Norwegian Open AI Lab. Eastern European Machine Learning Summer School (EEML) . Machine Learning Frontiers in Precision Medicine (MLFPM) .	2020, 2021 2021 2021 2019, 2020
Publications	*Co-first authors. Order determined by coin flip.	
Dissertations	<u>D.Barrejón</u> How can humans leverage machine learning? From Medical Data Wrangling to Learning to Defer to Multiple Experts <i>PhD Thesis Dissertation, Universidad Carlos III de Madrid, 2023.</i>	
Peer-review Conferences	R. Verma*, <u>D.Barrejón</u> *, E. Nalisnick Learning to Defer to Multiple Experts: Consistent Surrogate Losses, Confidence Calibration, and Conformal Ensembles <i>Artificial Intelligent and Statistics (AISTATS), 2023.</i> R. Verma, <u>D.Barrejón</u> , E. Nalisnick On the Calibration of Learning to Defer to Multiple Experts <i>In ICML 2022 Workshop on Human-Machine Collaboration and Teaming, 2022.</i> <u>D.Barrejón</u> , Pablo M. Olmos, A.Artés-Rodríguez Temporal-hierarchical VAE for Heterogenous and Missing Data Handling. <i>Bayesian Deep Learning workshop @NeurIPS 2020, Poster presentation.</i>	
Journals	<u>D.Barrejón</u> , Pablo M. Olmos, A.Artés-Rodríguez Medical data wrangling with sequential variational autoencoders <i>In IEEE Journal of Biomedical and Health Informatics, 2021.</i>	
Reviewing	International Conference on Machine Learning (ICML) International Conference on Learning Representations (ICLR) Neural Information Processing Systems (NeurIPS) Artificial Intelligence and Statistics (AISTATS) Deep Generative Models for Health Workshop @ NeurIPS Advances in Approximate Bayesian Inference (AABI) @ ICML	2023, 2024 2024 2023 2023 2023 2023
Grants & Prizes	Top reviewer in <i>Neural Information Processing Systems (NeurIPS)</i> Top 10% reviewer in <i>Artificial Intelligence and Statistics (AISTATS)</i> Research Visit Grant , Universidad Carlos III de Madrid FPU Grant to fund doctoral Studies, Spanish Ministry of Education	2023 2023 2022 2020
Volunteering	Volunteer and attendant in <i>Artificial Intelligence and Statistics (AISTATS)</i> conference. Tutor for Linear Algebra in Universidad Carlos III de Madrid <i>Let's be friends with books</i> : Erasmus + project in Iğdır, Turkey (19 Apr.- 26 Apr.)	2021, 2022 2018 2017
Computer Skills	Programming Languages : Python, Matlab, Latex. DL Frameworks : Pytorch, Hugging Face, Tensorflow, Keras. Hugging Face Frameworks : Transformers, Diffusers, Accelerate. ML Utils : Scikit-learn, OpenCV, PIL, MLFlow. Databases : SQL, SQLite, Django ORM. Others : Git, Inkscape, Jira, Confluence, AWS S3, replicate.ai	
Languages	Spanish : Mother tongue. English : Advanced User C1. French : Upper Intermediate User B2. German : Intermediate User B1.	
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.	