





Sergio Barrachina-Muñoz, Ph.D. Research Engineer, ML/LLMs & Technical Lead

CONTACT INFORMATION	Email: barachina.sergio@gmail.com Website: https://sergiobarra.github.io/ Barcelona (Spain)	Tel: +34 608108238    
PROFESSIONAL SUMMARY	Leveraging my background as a Telco/AI PhD and research scientist (h-index 19, 1000+ citations), I specialize in the convergence of 5G/6G, Wi-Fi, and AI/ML. As head of a research lab/datacenter with a team of 5, I also lead the infrastructure that supports our work. I develop and deploy production LLM applications for both research project solutions and intelligent lab operations. Additionally, I bring over a decade of experience teaching undergraduate engineering students.	
PROFESSIONAL EXPERIENCE	<p>Senior Researcher in <i>Services as NetworkS (SaS)</i> at <i>CTTC</i> Mar 2021 - <i>currently</i></p> <ul style="list-style-type: none">• Architected and administered a large-scale, cloud-native datacenter (3,000+ CPU cores, 15 TB RAM, 1 PB storage, 20+ GPUs) to support AI/ML workloads and network research. Leading a team of 5 researchers and engineers.• Spearheaded the design and development of an Experiment-as-a-Service (ExaS) platform, letting external stakeholders set up and perform 5G/6G experiments remotely.• Led the end-to-end development of multiple proofs-of-concept (PoCs), including O-RAN, 5G cores, satellite, and AI/LLM-based frameworks across edge and cloud.• Managed the experimental part of 10+ EU/Spanish research projects, from planning to technical delivery and reporting. <p>Course Instructor at <i>UOC</i> Feb 2021 - <i>currently</i></p> <ul style="list-style-type: none">• Teach networking courses, mentoring 150+ students annually in telecom concepts. <p>Lead QA engineer, Wi-Fi expert at <i>Centum Solutions</i> Jan 2021 - Mar 2021</p> <ul style="list-style-type: none">• Defined standards and procedures for automated testing infrastructure. <p>Software developer engineer intern at <i>Ricoh Spain</i> Feb 2015 - Oct 2015</p> <ul style="list-style-type: none">• Java ME development and service/project support. <p>QA intern at <i>Vendo Services</i> Jun 2014 - Oct 2014</p> <ul style="list-style-type: none">• Wrote and executed test scripts and plans in development, staging, and production.	
EDUCATION	<p>PhD in the <i>Wireless Networking</i> research group (UPF) Oct 2016 - Jan 2021</p> <ul style="list-style-type: none">• Thesis (<i>cum laude</i>): “<i>Responsive spectrum management for WLANs: from heuristic-based policies to model-free reinforcement learning</i>”.• Research stay at <i>Rice Networks Group</i> in Rice University (Houston, United States). <p>MSc, <i>Intelligent and Interactive Systems</i> at UPF Sep 2015 - Jul 2016</p> <p>BSc, <i>Telematics Engineering</i> at UPF (<i>Top of class</i>) Sep 2011 - Jul 2015</p>	
SKILLS	<ul style="list-style-type: none">• Programming: Python, Java, C/C++, Go, Matlab, <i>LaTeX</i>• AI & MLOps: LLMs, Ollama, n8n, RAG, multi-agent frameworks, fine-tuning (LoRA), CI/CD pipelines, NVIDIA CUDA, PyTorch, MCP, Weights & Biases (wandb)• Cloud & DevOps: Linux, LXD, TCP/IP, Docker, Kubernetes, OpenStack, Tofu (Terraform), Ansible, Puppet, Prometheus, Grafana, Kafka• Telecom & 5G: Open5GS, Free5GC, OpenAirInterface, Amarisoft, SRS• Collaboration & Workflow: GitHub, GitLab, Jira, Confluence, Agile, Kanban	
LANGUAGES	English (C1), Spanish (C2), Catalan (C2), German (A1)	
REFERENCES	<ul style="list-style-type: none">• Rasoul Nikbakht, <i>Senior ML Engineer at Keysight Tech.</i> rasoul.nikbakht@keysight.com• Luis Sanabria-Russo, <i>DevOps Engineer at O(1)</i> luis@collabs.org.com• Edward Knightly, <i>Head of Networks at Rice University</i> knightly@rice.edu	