Sergio Barrachina-Muñoz   Telco Ph.D, MLOps & Cloud Infrastructure Engineer

CONTACT INFORMATION	Email: barachina.sergio@gmail.com Website: https://sergiobarra.github.io/ Barcelona (Spain)	Tel: +34 608108238

PROFESSIONAL SUMMARY

PhD-level AI/ML engineer and MLOps lead specializing in architecting large-scale, cloud-native systems. Proven expertise in managing high-performance datacenters (3,000+ cores, 20+ GPUs) to support cutting-edge 5G/6G research. Adept at leading teams to build and deploy automated, AI-driven frameworks using Kubernetes, Docker, and CI/CD pipelines. Seeking to leverage deep experience in MLOps and AI research to build and scale intelligent cloud solutions.

PROFESSIONAL EXPERIENCE

Senior Researcher in Services as NetworkS (SaS) at CTTC   Mar 2021 - *currently*
- 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 for a team of 5+ people.
- Spearheaded the design and development of an "Experiment-as-a-Service" (EaaS), enabling autonomous, remote access to 5G/6G testbeds for external stakeholders.
- Led the end-to-end development of multiple 5G/6G proofs-of-concept, including a 5G RAN, O-RAN, core, 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.

Course Instructor at UOC   Feb 2021 - *currently*
- Teach networking courses, mentoring 150+ students annually in telecom concepts.

Lead QA engineer, Wi-Fi expert at Centum Solutions   Jan 2021 - Mar 2021
- Defined standards and procedures for automated testing infrastructure.
- Communicated with stakeholders to understand and clarify performance requirements.

Software developer engineer intern at Ricoh Spain   Feb 2015 - Oct 2015
- Java ME development and service/project support.

QA intern at Vendo Services   Jun 2014 - Oct 2014
- Wrote and executed test scripts and plans in development, staging, and production.

EDUCATION

PhD in the Wireless Networking research group (UPF)   Oct 2016 - Jan 2021
- Thesis (`cum laude`): *Responsive Spectrum Management for WLANs*. Link.
- Research stay at Rice Networks Group in Rice University (Houston, United States).
- Teaching assistant for computer networks (10 semesters).

MSc, Intelligent and Interactive Systems at UPF   Sep 2015 - Jul 2016
BSc, Telematics Engineering at UPF (***Top of class***)   Sep 2011 - Jul 2015

SKILLS
- **Programming**: Python, Java, C/C++, Go, Matlab, LaTeX
- **AI & MLOps**: LLMs, Ollama, RAG, multi-agent frameworks, CI/CD pipelines, NVIDIA CUDA, PyTorch
- **Cloud & DevOps**: Linux, LXC, TCP/IP, Docker, Kubernetes, OpenStack, Ansible, Puppet, Prometheus, Grafana, Kafka *Preparing for CKA certification.*
- **Telecom & 5G**: Open5GS, Free5GC, OpenAirInterface, Amarisoft, SRS
- **Collaboration & Workflow**: Git, GitLab, Jira, Agile, Kanban, Scrum

LANGUAGES

Spanish (C2), Catalan (C2), English (C1), German (A2)

REFERENCES
- Luis Sanabria-Russo, *DevOps Engineer at O(1)*   sanabriarusso@gmail.com
- Edward Knightly, *Head of Networks at Rice University*   knightly@rice.edu