Enrique GARCIA

✉ garciag.enr@gmail.com

 garciagenrique
 github.com/garciagenrique
 0000-0003-2224-4594

ABOUT

Software engineer with experience leading technical teams on international projects, with expertise in DevOps & Cloud, Scientific Computing, Data analysis, Software development and classical Machine Learning. Driven by a continuous learning mindset shaped by my background in Physics and Astrophysics, and my international career.

SKILLS

Software & Data: Python, Bash, Git, REST APIs, Data analysis, Classical Machine Learning.

Cloud & DevOps: Kubernetes, Docker, Singularity, Helm, Flux, ArcoCD, OpenStack, Terraform, GitOps, CI/CD (GitLab, GitHub).

Project Leadership: Agile and Scrum Methodologies.

Identity Management: IAM, OAuth 2.0, OIDC.

Observability: Grafana, Kibana, Prometheus.

Databases: PostgreSQL, MySQL.

HPC & Distributed Computing: Slurm, HTCondor., REANA, Rucio, CVMFS.

Web Technologies: Node.js, JavaScript.

LANGUAGES

Spanish: native.

English: C1 - proficient.

French: C1 - proficient.

EXTRACURRICULAR ACTIVITIES

Driving license: Type B.

Mountaineering instructor: *Club Alpain Français d'Annecy* (2022 - 2025).

Paragliding Pilot License (FFVL).

Advanced Open Water Diver.

Eight years of **music theory** and **Piano** education (*Trinity Guildhall*).

Astronomy Outreach Coordinator, Antares Astronomy Club (2008-13), and **President** (2011).

Scout **camp counsellor** for children and teenagers - *Grupo Scout Pinar* (2007 - 2014).

WORK EXPERIENCE

CERN – Geneva, Switzerland. Oct 2022 – Sep 2025
Scientific Computing Fellow – IT department, Tech Coordination group.

- **Coordinator of the ESCAPE VRE (Virtual Research Environment) platform:** maintenance and development of the VRE, a community-driven **analysis facility** that allows end-to-end scientific analyses.
  - Via a unique login (**ESCAPE INDIGO IAM**) the VRE links interactive Notebooks (**JupyterHub**) with a scientific data management service (**RUCIO** framework) and enables the offloading of workflows to a platform focused on scientific reproducibility (**REANA**).
- **Led the consolidation of ESCAPE** (EU H2020 project) **partner's activities** across data management and scientific analysis platforms.
- **Contributor** to the standardization of scientific data management infrastructure for small- and medium-scale experiments at CERN using Rucio.
- **Contributor** to the Rucio source code, **deputy** of the JupyterLab plugin.
- **Contributor** to the integration of the VRE into the EOSC EU Node (European Open Science Cloud) during the setup of the CERN Node and the EOSC Association.
- **Supervisor** of three CERN Summer Student projects: REANA & Zenodo JupyterLab extensions and their OAuth2.0 implementation.

LAPP/CNRS-IN2P3 – Annecy, France. Jul 2019 – Sep 2022
Data and Software Engineer – CTA/HESS High energy astrophysics group.

- **Developer** of software libraries and data analysis pipelines for the LST and CTA collaborations. **Contributor** to the integration of the real-time analysis pipeline into the CTA/ACADA framework.
- LST-1 Cherenkov **telescope operator** (1 month on site and 1 year remotely).
- **Teaching assistant** for laboratory classes at the IUT of Annecy (*Université Savoie–Mont Blanc*) in Electrical Engineering and Industrial Computing.
- **Tutor** in the ESCAPE 2021 and 2022 summer schools & LST 2022 LST data analysis school.

Altran-Tesella (WCC Madrid) – Madrid, Spain. Oct 2018 – Jun 2019
Junior Data Scientist / Consultant.

- **Provision** of **tailored guidance** and **support** for digital transformation within Spanish companies. Implementation of classical Machine Learning (ML) models according to client needs.

IPAG/OSUG, Grenoble (France) – PhD Candidate. Nov 2014 – Sep 2017
CAB/INTA-CSIC, Madrid (Spain) – MSc student intern. Sep 2013 – Sep 2014

EDUCATION

MSc in Astrophysics Sep 2013 – Sep 2014
Universidad Complutense de Madrid (UCM)

BSc in Physics (5 year degree) Sep 2008 – Sep 2013
Universidad Autónoma de Madrid (UAM)

- Erasmus exchange *Niels Bohr Institute* (Copenhagen) Sep 2012 – Jun 2013

PROFESSIONAL REFERENCES

Simone Campana
WLCG Project Leader & CERN IT Department Head.
simone.campana@cern.ch

Xavier Espinal Currull
Capacity Planning Leader, CERN, IT department.
xavier.espinal@cern.ch

Thomas Vuillaume
Ingénieur de recherche, LAPP/CNRS-IN2P3.
thomas.vuillaume@lapp.in2p3.fr

RELEVANT PUBLICATIONS

Additional publications available through orcid.

- *Data discovery, analysis and reproducibility in Virtual Research Environments -* arXiv link
- *A Pilot Analysis Facility at CERN, Architecture, Implementation and First Evaluation -* CHEP 2024 link
- *The Virtual Research Environment: A multi-science analysis platform -* EPJ Web of Conferences link
- *The Science Alert Generation system of the Cherenkov Telescope Array Observatory –* arXiv link
- *Performance of the Large-Sized Telescope prototype of the Cherenkov Telescope Array –* arXiv Link