

Alejandro García Muñoz

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Work Experience

- Mapfre (through Viewnext)** **Madrid, Spain | 100% Remote**
Architecture and Development Security *2024 - present*
Developing security automation solutions in Mapfre's Security department, creating **GitHub Actions** that integrate **Trivy** and **Checkmarx** for Infrastructure as Code (IaC) security scanning across **AWS**, **Azure**, and **Google Cloud**. Implement custom security checks using **Python** based on team-defined security requirements, building automated pipelines that generate comprehensive vulnerability reports. Act as technical bridge between DevOps and Security teams, facilitating the integration of security practices into the development pipeline while maintaining a **shift-left** security approach.
- HP** **Barcelona, Spain | Remote**
Large Format Printing *2023 - 2024*
Focused on **DevOps** and **software architecture**. Enhanced **CI/CD** processes and optimized complex **Python build systems**. Primary technologies: **Docker**, **GitHub Actions**, **Jenkins**, **Python**, **Bash**, **Linux**. Secondary: **Kubernetes**, **Ansible**, **Grafana**, **C/C++**, **Swig**, **Apache**, **Jupyter**.
- GMV Aerospace and Defence.** **Madrid, Spain**
Australian Global Navigation Satellite System (GNSS) *2022 - 2023*
DevOps Engineer developing multi-nodal **Jenkins** platform for **Continuous Integration** and task automation. Managed **Linux** servers and development environments. Technologies: **Docker**, **Redmine**, **Zabbix**, **Notion**, **Uyuni**, **VMware**.
- European GNSS** *2022 - 2022*
Maintained custom Real-Time server for European GNSS project. Automated testing and troubleshooting with **Python** and **Bash** scripts. Created client documentation and estimated spare parts requirements, integrating software solutions for hardware maintenance.
- RWTH Aachen University.** **Aachen, Germany**
Institut für Werkstoffe der Elektrotechnik 2 (IWE2) *2019 - 2022*
Part-time: Developed custom **Python library** for lab equipment integration with **SQL database** for measurement storage. Implemented hardware control interfaces for scientific instruments and **microcontrollers**. Required deep understanding of both hardware protocols and software architecture.
- Helmholtz Zentrum Dresden Rossendorf** **Dresden, Germany**
Department of Semiconductor Materials *Summer of 2019*
HZDR Summer Student Program: Laboratory assistant in semiconductor department focusing on advanced materials. Conducted precise measurements, sample preparations, and data analysis for semiconductor characterization.
- Universidad Complutense de Madrid** **Madrid, Spain**
Department of Thin Films and Microelectronics *2018 - 2019*
Research assistant studying Molybdenum Oxide for **solar cells**. Performed high-pressure sputtering, thin film characterization, and **data analysis**.

Education

- RWTH Aachen University** **Aachen, Germany**
Master's Degree in Experimental Condensed Matter Physics. *2019 - 2022*
Specialized in **condensed matter** physics. Master's thesis: Electrical characterization and data analysis of **ReRAM** devices for **Neuromorphic Computing** applications, focusing on set/reset transition stability.
- Universidad Complutense de Madrid** **Madrid, Spain**
Bachelor's Degree in Physics. Experimental Physics specialized in Electronics. *2014 - 2019*
Experimental Physics specialization in Electronics. Focus on micro/nano-electronics, **solid-state physics**, **transistors**, **analog and digital electronics**.

Languages

- Spanish.** Native.
- English.** Proficient

Certifications

- Microsoft Azure Fundamentals**

Publications

- V. Begeza, E. Mehner, H. Stöcker, Y. Xie, A. García, R. Hübner, D. Erb, S. Zhou, and L. Rebohle, "Formation of Thin NiGe Films by Magnetron Sputtering and Flash Lamp Annealing," *Nanomaterials*, vol. 10, p. 648, Mar. 2020.
- P. Stasner, T. Hennen, E. Gorbunova, A. Munoz, R. Waser, and D. Wouters, "Full factorial analysis of gradual switching in thermally oxidized memristive devices," *Journal of Applied Physics*, vol. 135, 06 2024.