Raquel García Marañón

Physicist, Data Engineer and Scientist for Payload Data Processing and Applications for Satellites

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Madrid, Spain

Education

- **Bachelor of Science in Physics, GPA: 1.6 of 4.0**
  Complutense University, Madrid, 2016-2022
  — *Bachelor's Thesis: "Multivariate analysis of astrophysical data", in R language, GPA: 3.0 of 4.0*

- **Master in Statistical and Computational Processing of Information**
  Politécnica University, Madrid, 2022-Present

Employment

- **GMV Aerospace Defence S.A.U**
  Junior Scientist and Project Engineer - Madrid, ES
  July 2021 - Present

  – Scientist / Engineer job position in the Payload Data Processing Division within L2 Science developments Units for EarthCARE's CARDINAL (ESA / JAXA project) within the broad-band radiometer team.

  – **Main Task** Scientific investigation. Evaluating the retrieved data and procedural assessment of the performance of L2 BBR/MSI/ATLID–FLX processor belonging to the EarthCARE climate study satellite chain.

  – Prior and main use of Linux, Python 3, Fortran 90, C, bash, Git, Atlassian Suit: Confluence , Jira , FishEye.

  – Expected knowledge acquisition in Jenkins (automation server) and use of Monte Carlo and random forest computational algorithms.

  – Interaction with customers - On site conferences and participation in progress meetings with ESA in CLARA and CARDINAL CCN1 & CCN2 at KNMI.

  – Creating cloud properties datasets from RT simulations for ANN network performance analysis: perceiving and resolving anomalies.

Internship

- **GMV**
  Project: Data processing for space missions - Madrid, ES
  October 2020- June 2021
  Advisor: Carlos Doménech García
  Contributions:

  – Internship in GMV Aerospace and Defense S.A.U., developments in research projects for the European Space Agency. ESA EarthCARE, project CLARA (Clouds, Aerosol and Radiation Assessment Products for EarthCARE) and ICERAD.

  – Gained experience working with a virtual machine which executed CentOS 7, a GNU/Linux OS distribution.

  – Learned about developing the algorithms that compose the EarthCARE BMA-FLX processor, its software and products. Also, the importance of the radiance-to-flux conversion algorithms developed for the BroadBand Radiometer at EarthCARE satellite.

  – Acquired knowledge in: Fortran 90, Angular Distribution Models (ADMs), Artificial Neural Networks (ANNs), Virtual Box, etc.

Courses and Certifications

- **"R-Member: Viajando con los datos"** (Translation: "R-member: travelling with data")
  Taught by Izaskun López-Samaniego, Pedro Concejero. U-TAD

- **Professional course: Python.**
  CodewithMosh, (Online)

- **Artificial Intelligence and Big Data Course**
  GMV

- **Introduction to Quality Management System Course**

- **Applications of Satellite Earth Observation data for global social benefits**
  Taught by Carlos Doménech García, PhD. / GMV

- **Digital competencies for professionals course.**
  Santa María la Real Foundation / Fundación Santa María la Real

- **Web development Introductory Course: HTML and CSS**
  University of Alicante / Universitat D'Alacant

- **Cloud computing course**
  EOI Business School / Escuela de Organización Industrial

Technical Experience

- **Programming**

| Python | R | MatLab |

- **Software**
  LaTeX, Linux, Origin/Scidavis, Microsoft Office 365, Ubuntu, CentOS 7, bash, Atlassian Suite, Atom

- **Nonrelated Software**
  Pocreate, Sweet Home computer-aided design, Notion

Languages

English (C1 CEFR)   Spanish (Native)

Honors and awards

- Second place in entrepreneurship contest "Cuál es tu Vaca" (2014)

Volunteering and unrelated experiences

- Saleswoman at LUSH Spain, Fresh Cosmetics
  December 2019 - January 2020

- Volunteer in Asociación Española contra el Cáncer/AECC, fundraising for scientific research and technological development against cancer.
  (2019)

- Handball player in youth handball team "Balonmano Nava".
  (2012-2016)

- Vice President of Campus Association: "Rolatividad UCM".
  (2020-2021)

Other highlighted skills

- Experience with technical reports.

- Great teamwork performance.