

FERNANDO GARCÍA GUTIÉRREZ

Senior Data Scientist

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EXPERIENCE

Senior Data Scientist

Intelygenz - VASS

📅 October 2024 – Present 📍 Madrid

- Deliver end-to-end AI solutions for clients, from problem definition to deployment and monitoring.

Data Scientist

Department of Artificial Intelligence and Big Data applied to Neurology, Ace Alzheimer Center

📅 April 2022 – October 2024 📍 Barcelona

- Developed neuroimaging and speech-processing pipelines for clinical research.
- Built AI models for speech and neuroimaging analysis to support cognitive-impairment detection.
- Implemented statistical analyses and contributed to project management and scientific publications.

Data Scientist

Investing PROFit Wisely

📅 May 2021 – April 2022 📍 Madrid

- Developed machine learning models for financial applications and forecasting.
- Implemented the internal data model and built analytical dashboards for business monitoring.

Intern

Department of Computer Architecture and Automation, Complutense University of Madrid

📅 February 2020 – July 2020 📍 Madrid

- Developed predictive models for neurodegenerative disease research.

EDUCATION

PhD Student

Department of Computer Architecture and Automation, Complutense University of Madrid

📅 September 2020 – Present

PhD Program in Computer Science

Thesis: New approaches based on Artificial Intelligence for the study of neurodegenerative diseases and brain connectivity.

Master's Degree in Computational Biology

Polytechnic University of Madrid

📅 September 2019 – September 2020

Specialisation in Computational Biology and Big Data. Master's Degree taught in English, with honors in Big Data and Programming Foundations.

Thesis: Tool for automatic diagnosis of neurodegenerative diseases by Machine Learning techniques.

Biochemistry Degree

University of the Balearic Islands

📅 September 2015 – June 2019

Thesis: Exploring the development and applications of DESI-MS (desorption electrospray ionization mass spectrometry) and REIMS (rapid evaporative ionization mass spectrometry) technologies.

FEATURED PUBLICATIONS

- **(Q1-journal)** García-Gutiérrez, Fernando, et al. "Deep multimodal learning for domain-level cognitive decline prediction in Alzheimer's disease" *Frontiers in Artificial Intelligence* (2025).
- **(Q1-journal)** García-Gutiérrez, Fernando, et al. "Predicting changes in brain metabolism and progression from mild cognitive impairment to dementia using multitask Deep Learning models and explainable AI." *NeuroImage* (2024).
- **(Q1-journal)** García-Gutiérrez, Fernando, et al. "Unveiling the sound of the cognitive status: Machine Learning-based speech analysis in the Alzheimer's disease spectrum." *Alzheimer's Research & Therapy* (2024).
- **(Q2-journal)** García-Gutiérrez, Fernando, et al. "Harnessing acoustic speech parameters to decipher amyloid status in individuals with mild cognitive impairment." *Frontiers in Neuroscience* (2024).

TECHNICAL KNOWLEDGE

Programming

- **Python:** 5+ years of experience (data science, ML, pipelines, automation).
- Familiar with **software engineering** best practices (OOP, design patterns, testing, CI/CD).
- Basic working knowledge of C/C++, Java, Go, JavaScript, MATLAB, R, and Ruby.

Artificial Intelligence

Strong theoretical and hands-on experience in Machine Learning and Deep Learning, applied to real-world problems across tabular, time-series, audio, and image data.

Main areas of expertise:

- Supervised, unsupervised, and semi-supervised learning.
- Computer vision (object detection, segmentation) and 3D (Gaussian Splatting).
- Generative AI (LLMs, diffusion) and agent design.
- Reinforcement learning.
- Probabilistic graphical models.
- Explainable AI.
- Graph Neural Networks.
- Feature selection and model interpretability techniques.

Statistics

Descriptive and inferential statistics, probability, and data visualization.

Databases

Relational and NoSQL databases; data modeling and ontology design.

Tools & Platforms

Unix/Linux, Git, Docker, LaTeX.

Neuroimaging

FreeSurfer, FSL, SPM12, CAT12, ANTs, PETPVC.

LANGUAGES

Spanish (native)



English (accredited B2 level)



SKILLS

- Cross-functional collaboration in interdisciplinary teams across research, clinical, and engineering environments.
- Strong analytical and critical thinking, translating ambiguous problems into actionable ML solutions.
- Clear communicator capable of explaining technical results to technical and non-technical stakeholders.
- Self-driven and adaptable learner with a rapid prototyping and iterative improvement mindset.
- Team planning and delivery with effective task prioritization, coordination, and ownership.

OTHERS

- **Publications:** 32 peer-reviewed papers (6 first-author; 26 co-authored).
- **Invited speaker** at 3 international conferences (ADPD 2024, EADC 2024, IMCIC 2024).
- **Research projects (national/international):** SpeechDx, COMFORTage, TARTAGLIA, SCAP-AD.
- **Supervision:** BSc thesis (UCM) on deep learning for neuroimaging-based diagnosis of neurodegenerative diseases.