Frank A. Ricardo

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EDUCATION

- **University of Navarra** — Donostia/San Sebastian, Spain
  PhD in Applied Engineering — *2022-present*
  Machine Learning, Deep Learning, Computer Vision.

- **University of Huelva and International University of Andalusia** — Huelva, Spain
  MSc in Economics, Finance and Computer Science, GPA: 8.85/10 Summa Cum Laude — *2021-2022*
  "Honors" degree in Programming, Optimal Control, Deep Learning and Optimization.

- **Technological University of Havana** — Havana, Cuba
  BSc Automation Engineer, GPA: 4.62/5.0 Magna Cum Laude — *2012-2017*

RESEARCH EXPERIENCE

- **University Isabel I** — Remote
  Assistant Teacher — *Feb. 2024-present*
  Supervisor of Master Degree projects in the field of Technology and Artificial Intelligence.

- **University of Navarra. Tecnun School of Engineering** — Donostia/San Sebastian, Spain
  Assistant Teacher — *Sept. 2022-present*
  Subject: "Deep Learning for Computer Vision" at Master degree.
  Subject: "Programming in Matlab" at Bachelor degree.
  Supervisor of Master Degree projects in the field of Artificial Intelligence and Computer Vision.

- **CEIT - Technology Center** — Donostia/San Sebastian, Spain
  Assistant Researcher — *Sept. 2022-present*
  Machine Learning, Deep Learning, Computer Vision.

- **Technological University of Havana** — Havana, Cuba
  Instructor Teacher — *Sept. 2018-Nov. 2021*
  Subject: "Programmable Logic Controllers and SCADA systems" at Bachelor Degree.
  Subject: "Design of SCADA systems" at Bachelor Degree.
  Supervisor of Bachelor Degree graduation projects.

CONFERENCE PRESENTATIONS

- **VI Young Scientist Conference on Design of Experiments and Data Sc.** — Pamplona, Spain
  "Wood heterogeneous grain classification for wine barrels:
  a cropping data augmentation approach" — *June 2023*
  Authors: Frank A. Ricardo, Martxel Eizaguirre, Diego Borro.

- **Tecnun Student Research Conference** — Donostia/San Sebastian, Spain
  Poster: "Deep Learning Approaches For Automatic Dismantling And
  Recovery Of Rare Earth Elements From End-Of-Life Products" — *Jan. 2024*
  Authors: Frank A. Ricardo, Diego Borro.

PUBLICATIONS

- Iparraguirre, O., **Ricardo, F.A.**, Brazalez, A., Borro , D. "Enhancing Weather Adaptability in Autonomous Vehicles: Deep Learning-Based Fog Detection for Improved Environmental Perception". *Spanish Computer Graphics Conference (CEIG)* 2024.

- **Ricardo, F.A.**, Eizaguirre, M., Moru, D.K., Borro, D. "Intelligent Manufacturing in Wine Barrel Production: Deep Learning-Based Wood Stave Classification". *AI* 2024, 5, 2018-2036. doi.org/10.3390/ai5040099

Awards

- International Talent Attraction Scholarship for Master's Studies, University of Huelva, 2021.
- Extraordinary Award for the Best Academic Record in Master's Studies, University of Huelva, 2022.

Certifications and Licenses

- **Instructor Teacher. Technological University of Havana**   Havana, Cuba. 2019
- **Expert Training Bottlepack 321-115/117. Rommelag Engineering**   Havana, Cuba. 2019
- **Object Detection**   Coursera - Autonomous University of Barcelona. 2022
- **Mathematics for Machine Learning and Data Science** (3 courses)   Coursera. 2023
    - Linear Algebra for Machine Learning
    - Calculus for Machine Learning and Data Science
    - Probability and Statistics for Machine Learning and Data Science
- **Machine Learning Specialization** (3 courses)   Coursera - Stanford University. 2023
    - Supervised Machine Learning: Regression and Classification.
    - Advanced Learning Algorithms
    - Unsupervised Learning, Recommenders, Reinforcement Learning
- **TensorFlow: Advanced Techniques Specialization** (4 courses)   Coursera. 2023
    - Custom Models, Layers, and Loss Functions with TensorFlow
    - Custom and Distributed Training with TensorFlow
    - Advanced Computer Vision with TensorFlow
    - Generative Deep Learning with TensorFlow
- **Deep Neural Networks with PyTorch**   Coursera - IBM. 2023

Skills

- **Computational skills:** Visual Basic for Applications; Python; MATLAB; Unix/BASH; Fortran; TensorFlow; Pytorch; Machine Learning; Deep Learning; eXplainable AI; SQL; Data Analysis.

- **Technical skills:** Low and medium voltage electrical installations; wired logic control systemas; Programmable Logic Controllers (PLC); Supervisory Control and Data Acquisition Systems (SCADA); HVAC systems control; Machine tools control.

- **Languages:** Spanish (native), English (fluent).