Daniel **Fernández Martínez**

JAE Intro ICU Research Fellow · Machine Learning Research Assistant
Lab C 1.7, Industrial Engineering School, University of Extremadura
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Summary

Research support engineer experienced in time series analysis, deep learning and data driven models of dynamical systems. Interested in data science and graph theory optimization methods. Seeking for a Phd. fellowship in the field of Artificial Intelligence.

Work Experience

Artificial Intelligence Research Institute, IIIA - CSIC — *Barcelona, Spain*

JAE Intro Research Fellow — *Oct. 2021 - PRESENT*

- Master Student Researcher at the Group of Logic and Reasoning
- Project: An AI-based recommendation system for "green routes" in sustainable urban environments
- Abstract: Develop a multi-objective optimization AI system that recommends "green routes" to citizens that commute within an urban environment, by taking into account both the quality of the environment and the minimization of the travel time

Industrial Engineering School, University of Extremadura — *Badajoz, Spain*

Machine Learning Research Assistant — *Nov. 2020 - PRESENT*

- Member of the Group of Industrial Applications of Artificial Intelligence
- Current project: "Advanced machine learning techniques for forecasting electrical energy consumption"
- Collect, pre-process and apply advanced docomposition techniques to time series data
- Develop deep learning supervised models using Python and Tensorflow
- Create a web-based service to test those models using Streamlit. Deploy a Keras Rest API through Flask
- Writing scientific articles, communications in congresses and participating in divulgation activities

Grupo Onisus & Prototipado — *Badajoz, Spain*

Undergraduate Intern — *Jul. 2019 - Aug. 2019*

- Project: Design of an electromyographic signal capture and processing system for controlling a low-cost robotic hand manufactured by 3D printing
- Study of the parameters involved in myoelectric sensing and characterize myoelectric signals
- Design of an electromyographic signal capture and processing system using Altium
- Program in C/C++ an expert system to control several servo motors governed by the ESP32 SoC to make the motion of the hand

Education

University of Extremadura — *Badajoz, Spain*

M.Sc. in Simulation in Science and Engineering — *Sep. 2020 - Exp. Nov. 2021*

- Thesis: Applying machine learning forecasting methods for electric power consumption in large companies

University of Extremadura — *Badajoz, Spain*

B.Sc. in Electronics and Automation Engineering — *Sep. 2015 - Jun. 2020*

- Thesis: Analysis and time series forecasting of air quality data of the city of Badajoz (10/10 with honors)
- Erasmus exchange programme: Bialystok University of Technology
- SICUE exchange programme: University of Cantabria

Certifications & Courses

2020	**Deep Learning Specialization**, deeplearning.io, Coursera	*Remote*
2016	**Object Oriented Programming in JAVA**, University of Extremadura	*Badajoz, Spain*
2015	**Certificate in Advanced English (CAE)**, University of Cambridge ESOL Examinations	*Badajoz, Spain*

Fellowships & Awards

2021	**JAE Intro ICU Research Fellowship**, Consejo Superior de Investigaciones Científicas	*Barcelona, Spain*
2019	**Erasmus Programme**, European Commission	*Bialystok, Poland*
2018	**SICUE Exchange Programme**, CRUE - Universidades Españolas	*Santander, Spain*