PEDRO HERRUZO SÁNCHEZ

Machine Learning Consultant & Data Scientist at SEAT, S.A. Associate Pre-doctoral Research Fellow at IARAI Ph.D. Student in AI at the Polytechnic University of Catalonia



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♀ Barcelona, Spain

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EXPERIENCE

Associate Pre-doctoral Research Fellow Institute of Advanced Research in Artificial Intelligence - IARAI

♥ Vienna, Austria

Rule detection and generalization in deep learning applied to geo-spatial data.

Machine Learning Consultant & Data Scientist SEAT. S.A.

Parcelona, Spain

Leading Machine Learning related tasks in projects related to future urban mobility:

- Mobility Advisor (presented in MWC 19 together with IBM).
- Socially Responsible Navigation (presented in SCEWC 18 together with Waze and the city council of Barcelona).

Research Scholarship **University of Barcelona**

Sep 2016 - Jul 2017 ⋅ 11 mos

Parcelona, Spain

Graduate Student Researcher at the CVUB group (ub.edu/cvub/) under the supervision of professor Petia Radeva: Deep Learning methodologies applied to Egocentric images.

BI Consultant

Indra Sistemas, S.A.

Exploitation of Data Warehouse Commercial Segurcaixa, Vidacaixa: Gathering requirements, functional and technical definition, designing and developing ETL processes with SAP BO, PowerCenter, Oracle and Control-M.

HONORS AWARDS



NeurlPS2019 Workshop: Outstanding Contribution

Traffic4cast competition by the Institute of Advanced Research in Artificial Intelligence (IARAI) and HERE Technologies.



Climate Change Challenge 2019: 3th position

Organized by the University of Barcelona, ISGlobal, and Ajuntament de Barcelona: Modeling the weather in the city of Barcelona.



Big Data & Al Congress Barcelona 2018: Best Master Thesis

We analyzed first-person stories automatically by means of egocentric pictures acquired with wearable cameras using AI.



DKV Seguros Health4Good 2016: Ideas Contest for Startups Second prize: an App that can create nutrition diaries automatically from only pictures, also proposing healthy eating habits.

EDUCATION

Ph.D. in Artificial Intelligence and Smart Mobility

Polytechnic University of Catalonia

2017 - 2020

♀ Barcelona, Spain

Explainable Graph Neural Networks, Recurrent Neural Networks, and its Applications into Traffic Forecasting in Cities.

Summer School · Deep Learning Indaba 2019

Kenyatta University

₩ Summer 2019

♥ Nairobi, Kenya

Strengthen African Machine Learning.

M.Sc. in Fundamental Principles of **Data Science**

University of Barcelona

Double B.Sc. in Computer Engineering and Mathematics

University of Barcelona

Ħ Sep 2010 - Jan 2016 P Barcelona, Spain

University of Groningen - Erasmus

Feb 2016 - Jul 2016 Groningen, Netherlands

B.BA. in Business Administration and Management

University of Barcelona

TEACHING

Teaching Assistant Pompeu Fabra University

Intro to Programming: 1st-year / Python.

University of Barcelona

Ħ Jan 2017 - Sep 2017 ♥ Barcelona, Spain

- Data Structures: 1st-year / C++.
- Operating systems I: 2nd-year / C.

PUBLICATIONS

Conference Proceedings

- Herruzo, Pedro and Josep L. Larriba-Pey. "Recurrent Autoencoder with Skip Connections and Exogenous Variables for Traffic Forecasting". In: Traffic4cast Workshop, Conference on Neural Information Processing Systems (NeurIPS) 2019. URL: https://arxiv.org/abs/1910. 13295.
- Herruzo, Pedro et al. "Towards Objective Description of Eating, Socializing and Sedentary Lifestyle Patterns in Egocentric Images". In: EgoApp Workshop, British Machine Vision Conference (BMVC) 2019.
- (2017). "Analyzing First-Person Stories Based on Socializing, Eating and Sedentary Patterns". In: *ICIAP Workshops*. Vol. 10590. Lecture Notes in Computer Science. Springer, pp. 109–119. URL: https://arxiv.org/pdf/1707.07863.pdf.

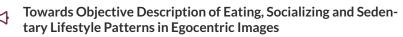
Journal Articles

Herruzo, P., M. Bolaños, and P. Radeva (2016). "Can a CNN recognize Catalan diet?" In: AIP Conference Proceedings 1773.1, p. 020002. DOI: 10.1063/1.4964956. eprint: https://aip.scitation.org/doi/pdf/10.1063/1.4964956. URL: https://aip.scitation.org/doi/abs/10.1063/1.4964956.

TALKS

Recurrent Autoencoder with Skip Connections and Exogenous Variables for Traffic Forecasting

Dec 2019 · Vancouver, Canada · NeurIPS: Traffic4cast Challenge Spotlight.



Sep 2019 · Cardiff, UK · British Machine Vision Conference.

You 1 Keeping Society Moving In A Connected World

Feb 2019 \cdot Barcelona \cdot 4YFN, side event of the Mobile World Congress with Avichai Bakst, Director of Business Development at Waze.

You 2 Socially Responsible Navigation

Nov 2018 · Barcelona · Smart City Expo World Congress, with Luca de Meo (presindent of SEAT, S.A.), and Jordi Caus (head of future urban concepts).

you 3 Big Data Talent Awards for the best master thesis

Nov 2018 · Big Data & Al Congress Barcelona Congress, with Laura Portell and Alberto Soto.

Barcelona towards a data-driven City: When data is the key in-

Oct 2018 · Barcelona · Open Data Barcelona (round-table).

SEAT S.A. from a Car Manufacturer to a Mobility provider Nov 2017 · Barcelona · IOT Solutions World Congress, with Josep L. Larriba-Pey (Co Founder of Sparsity Technologies).

L. Larriba-Pey (Co Founder of Sparsity Technologies).

ABOUT ME

"I am a technology enthusiast, with a strong technical background in machine learning, math and programming, and the experience to bring these fields together to create useful real-life applications. Throughout my life, I have had the opportunity to develop proficient public speaking, teamwork, time management, and leadership skills. I take pleasure in overcoming challenges and being creative, dedicated, and proactive. I enjoy human relations and like getting involved in and helping to manage social activities."

STRENGTHS

Communication Management	
Social Skills Strategy	
Machine Learning Computer Vision	
Graph Neural Networks Explainable A	
Recurrent Neural Networks	
Caffe, Keras, PyTorch	
C C++ C# Java Matlab	
Python R	
CSS HTML Javascript	

LANGUAGES

Catalan	•••••
English	
Spanish	••••

¹https://youtu.be/qERNVybd1Z8?t=628

²https://www.youtube.com/watch?v=Qo0mbgm5sHA

³https://www.youtube.com/watch?v=cqcCK3YHDVk&t=4m13s