# Ricardo Faúndez-Carrasco

AI - machine learning researcher


## date of birth

May - 24 - 1992

## contact

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LinkedIn profile


## languages

**ESP** mother tongue
**ENG** fluent (C1)
**JPN** basic (N5)

## programming

Python
Java
C/C++
R
Matlab & Simulink
Bash
CSS3 & HTML5
LaTeX

## skills

Responsability
Teamwork
Communication
Fast learner
Mathematical skills
Computer Vision
Speech Processing
HPC
Kalman filters
State-Space models

## Summary


I am a physicist profoundly interested in Artificial Intelligence. Experience hands-on in Deep Learning in time series analysis both in speech treatment and medical data. Looking for research positions.


## education

2015–2017 **M.Sc.** in Automation and Robotics — Universidad Politécnica de Madrid
*Deep Learning strategies for the enhancement of Automatic Speech Recognition architectures*
This thesis explored different state-of-the-art techniques such as LSTM cells, word2vec embeddings and convolutional layers and their effect on an HMM-DNN ASR system. Graded 10/10, candidate to Honors.

2016–2018 **M.Sc.** in Computational and Mathematical Engineering
Universitat Rovira i Virgili & Universitat Oberta de Catalunya
*Prediction of Breast Cancer survavival rates*
Ongoing thesis: applying data mining and machine learning algorithms in order to predict the evolution of both survival rates and treatments' effectiveness on breast cancer patients.

2010–2015 **Bachelor** in Physics — Universidad Autónoma de Madrid
*Isotropic-Nematic-Liquid crystal phase transition: a lattice model*
This thesis reported on Monte-Carlo simulations of liquid crystal's lattices undergoing phase transitions due to temperature or shape modifications. Graded 8.8/10.

## experience

2017–Now **National Institute of Informatics - NII** — Tokyo, Japan
*Research Intern*
Working on multi-model models trained and designed in a fashion so they can perform at the same time traditionally unrelated tasks, such as Speech Enhancement, Voice Conversion and Text-to-Speech Synthesis.
Pending of publishing our latest results in *INTERSPEECH.*

2017 **Escuela Técnica Superior de Ingenieros de Telecomunicación - UPM**
Madrid, Spain
*Research Assistant*
Focused Automatic Speech Recognition, doing research on different approaches based on Deep Learning to improve the accuracy of the whole system, at both acoustic and language level.

2015-2016 **Medicsen** — London, United Kingdom
*Research & Development*
Development of the first fully functional and automatic pancreas for diabetic patients. In charge of building the algorithms and mathematical models of the disease from scratch. Main achievements:

- Glycemic curve predicted with 85% accuracy on the 2-hours-ahead glycemic level from inputs on meal intake, insulin dose and exercise.
- **Patent**: MedicSen, 2016. Non-Invasive Artificial Pancreas, U.S. Applica- tion 50389, MED-001PR, filled January 2016.
- Co-speaker with Eduardo Jorgensen (MIT Innovator 2017) in RE-WORK Deep Learning in Healthcare Summit in London, April 2016.

2015 **La Paz Hospital** Madrid, Spain
*Intern*
Worked within the Radio-therapy and Nuclear Medicine Departments. Dealt with cancer treatments using Monte-Carlo simulations and denoising of medical images.

## volunteering

2017 **Collaborator in AILoveU** Madrid
Speaker at the Bussiness Institute (IE) in AILoveU Vol.2: "Siri's hearing aid" on the limitations of current Deep Learning technologies and its potential.

2014 **Collaborator in ESN-UAM** Erasmus Students Network
In charge of cultural city tours around the city of Madrid.

2012 **Board Member in AEGEE-Madrid** European Students Forum, Brussels
Treasurer, Summer University organiser of this student organisation, based on student exchanges and non-formal training.

2012 **Board Member of Séptimo Arte UAM** Universidad Autónoma de Madrid
Co-founder and Vice-president of this cinema forum student association.

## interests

**professional:** data science, neuroscience, quantum computing. **personal:** karate (1st Dan), meditation, basketball, travelling, beer tasting (awarded in a Prague brewery).