Ricardo **Faúndez-Carrasco**

AI - machine learning researcher

date of birth

May - 24 - 1992

contact

Av. Alberto Alcocer 30
Madrid, Madrid, 28036,
Spain

08092877582
+(0034) 600394426
(not calls)
skype: ricardo.kleinlein

ricardokleinklein@gmail.com
ricardokleinklein.github.io
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.

education

2017–Now **PhD. student** — Universidad Politécnica de Madrid
Human knowledge, or the representation we build of the world, comes from the joint understanding of all senses (touch, smell, taste, pain...). Traditional machine learning, and even the most recent papers on multi-task learning always take into account just one main task or input data type. We propose novel architectures that try to replicate in a computational environment the working principles of human brain.

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 survival rates
Thesis reporting on data mining and machine learning algorithms predicting the evolution of both survival rates and treatments' effectiveness on breast cancer patients. Pending to be published in *International Journal of Medical Informatics.*

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

2017–2018 **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.

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).