Javier Antorán

Personal Data

Place and Date of Birth:	Zaragoza, Spain | 20 May 1996
Native Languages:	English, Spanish
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Education

Sept. 2019 – Oct. 2018 — University of Cambridge, Darwin College, Cambridge
MPhil in Machine Learning and Machine Intelligence, Graduate degree
Research oriented Mphil focused on Bayesian ML, CV, NLP and Speech.

June 2018 – Sept. 2017 — Technical University of Denmark - DTU, Copenhagen
Telecommunications Engineering, Erasmus+ program
Gpa: 12/12 | Specialisation in Machine Learning and Antennas

June 2018 – Sept. 2014 — Universidad de Zaragoza, Zaragoza
Telecommunications Engineering (EE/CS), Undergraduate degree
Gpa: 9/10, Awarded Extraordinary Distinction | Class rank: *1*
240 ECTS | Specialisation in RF and Signal Processing
Degree student delegate | Counsellor for freshmen

Experience

Sept. 2018 – July 2018 — Software Engineering Summer Student, CERN, Geneva
Software Engineering for the ATLAS Data Acquisition (DAQ) group
Developed a full-scale integration testing tool which coordinated execution of the ATLAS experiment's DAQ chain. The project was built in python. Applied ML to detect issues in the DAQ. Member of the Inter-experimental Machine Learning workgroup (IML).

June 2018 – Jan. 2018 — Bachelors Thesis, Speech Group, Universidad de Zaragoza, Zaragoza
Researching Disentangling in Variational Autoencoders
Proposed an alternate variational autoencoder objective and a model capable of learning both unimodal and multimodally distributed disentangled latent variables. Received a grade of 9.8/10 with an Honorary Distinction.

Aug. 2017 – June 2017 — Intern at Graphics Lab, Universidad de Zaragoza, Zaragoza
Researching Neural Networks for Depth Imaging Applications
Designed convolutional autoencoders with skip connections to correct multipath interference in time of flight depth images. Became familiar with state of the art techniques in neural networks for image processing.

Feb. 2017 – Apr. 2015 — Student Researcher at Universidad de Zaragoza, Zaragoza
Implementing and evaluating IPsec tunnels in LISP networks
Studied the viability of setting up IPsec tunnels in conjunction with Locator/ID Separation Protocol *(LISP)* networks. Attempted to counteract overhead introduced by these protocols through packet multiplexing. Learnt how to deploy secure networks.

Publications and Technical Reports

Jan. 2019 **J. Antoran** and A. Miguel. Disentangling in Variational Autoencoders with Natural Clustering. *CoRR*, abs/1901.09415, arxiv.org/abs/1901.09415

Sep. 2018 **J. Antoran Cabiscol**. FELIX DAQ Integration Test Tool. *CERN-STUDENTS-Note-2018-147*, cds.cern.ch/record/2639275

Volunteering, Projects and Awards

July 2018 / Jan. 2016 — IEEE ESNOX1 Cube Satellite, Zaragoza
Electromagnetic sensor module design
Worked as part of the team that was building the satellite. Designed and built Helmholtz Coils. Used them to calibrate the HMC5883 electromagnetic sensor for the satellite.

Mar. 2018 — Adidas Hackathon Winner (1st Place), Zaragoza
Machine Learning Challenge
Used semantic segmentation to find clothes in pictures. Used a latent representation of these clothes in an infoGAN to generate new clothes designs tailored to each user's style.

June 2017 / Feb. 2015 — IEEE Student Branch Chairman, Zaragoza
Represented the IEEE Student Branch and organised projects related to Machine Learning, drones, 3D printing, electronics and hydroponics. Co-founder of the *'IEEE Days'* yearly event in which we hosted a series of workshops and distinguished speakers.

Mar. 2017 — Ucode Hackathon Winner (1st Place), Zaragoza
Everis Computer Vision Challenge
Deployed face and object detection and tracking software with Python, OpenCV and Tensorflow. The project consisted of a web-based video analysis application.

Technical Skills

Languages:	Python, C, MATLAB, Java, VHDL, Bash script, LaTeX
Machine Learning:	PyTorch, TensorFlow, Scikit-Learn, Caffe
Other Libraries:	HTK, SPTK, NLTK, Gensim, OpenCV, OpenFst
Operating Systems:	GNU-Linux, Solaris, OSX, Windows
Development:	Agile Methodologies / SCRUM, Gitlab CI/CD, Jenkins, Docker
Digital Electronics:	Xilinx ISE, TI Code Composer

Interests and Hobbies

- Behavioural psychology, Artificial Intelligence, Philosophy, Entrepreneurship
- 3D printing, Drone building and racing, Network security, SDR
- Skiing, Hiking, Climbing