

Lucia Montero Sanchis

M.SC. COMMUNICATION SYSTEMS AND DATA ANALYTICS

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EDUCATION

École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland 2017 – 2019
M.Sc. Communication Systems (specialized in Data Analytics)

Universidad Pontificia Comillas, Madrid, Spain 2012 – 2016
B.Sc. Telematics Engineering

EXPERIENCE

Machine Learning Engineer Intern Feb. 2019 – Sep. 2019
Schindler Elevator Ltd., Switzerland

- Matched patents to product specifications using natural language processing and information retrieval.
- Achieved 70% accuracy using FastText word embeddings with Python, NLTK, Gensim and scikit-learn.
- Tested and improved the performance in a real-case scenario working with patent attorneys and engineers.

Research Assistant Sep. 2018 – Feb. 2019
HCI in Learning and Instruction Lab, EPFL, Switzerland

- Analyzed writing strategies during online collaborative writing tasks, with Python and MySQL.
- Defined a set of features to analyze paragraph quality and consistency.
- Calculated the semantic similarity between authors at different stages of the writing process with sentence embeddings.

Data Scientist Intern Jul. 2018 – Sep. 2018
Dathena Science Ltd., Singapore

- Deployed new features to a production environment in Scala and Spark for classifying sensitive documents.
- Improved by 30% the accuracy of an optical character recognition pipeline for noisy documents, by correlating and denoising partial matches using reference text corpora with Python, Tesseract and scikit-learn.

Collaboration grant Jan. 2017 – Jun. 2017
Big Data Lab, Universidad Pontificia Comillas

- Designed and tested a distributed programming environment with Docker and Spark for future student projects.
- Deployed pipeline using Kafka, Flume and Cassandra as streaming data sources for the analysis of tweets with Spark.

PROJECTS

Recommender system with collaborative filtering algorithms and model stacking
• Trained nearest neighbor methods and latent factor models to predict user ratings with Python, NumPy and scikit-learn.

Deep learning for predicting the laterality of movements in EEG recordings
• Trained LSTM and CNN models with PyTorch for predicting the laterality of finger movements from EEG recordings.
• Evaluated the effects of downsampling the signals and applying preprocessing to improve the accuracy.

Bills in Congress visualization
• Created an interactive data visualization for insights on bills introduced in US Congress with D3.js and React.js.

Python Flask app using IBM Cloud services
• Deployed a Python Flask application for language translation and visual recognition with IBM Cloud, using Travis CI.

PROGRAMMING LANGUAGES AND TECHNOLOGIES

Languages	Python, Java, Scala, C, JavaScript, HTML, CSS	Machine learning	PyTorch, TensorFlow, scikit-learn
Analytics	SciPy, pandas, NumPy, R, Spark, Matlab	Miscellaneous	Git, Linux, Bash, SQL