

Jose Javier Gonzalez Ortiz

Curriculum Vitae

Massachusetts Institute of Technology,
Computer Science and Artificial Intelligence Laboratory

josejg.com
josejg@mit.edu

EDUCATION

Massachusetts Institute of Technology 2019-2023 (Expected)

Ph.D. Electrical Engineering and Computer Science
Advisor: John Guttag

Massachusetts Institute of Technology 2017-2019

M.Sc. Electrical Engineering and Computer Science (GPA: 5.00/5.00)
Thesis: Learning from Few Subjects with Large Amounts of Voice Monitoring Data
Courses: Machine Learning, Computer Vision, Distributed Systems, Computer Systems Security

Universidad Pontificia Comillas 2012-2016

B.Sc. Telematics Engineering, (GPA: 9.95/10.00, *Summa Cum Laude*)
Thesis: A Simple Power Analysis Attack on the TwoFish Key Schedule

University of Michigan, Ann Arbor 2015-2016

Exchange program in Computer Science (GPA: 3.94/4.00)
Key Courses: Cryptography, Parallel Computing, Entrepreneurship, Information Retrieval

RESEARCH AND WORK EXPERIENCE

Facebook AI Research, Montreal, Research Intern 2020

- Led a project analyzing distributed training of DNNs, with an emphasis on improving generalization performance & reducing communication.
- Carried out experiments to identify the synchronization trade-off when training networks in a data parallel regime over many nodes.

CERN Openlab, Geneva, Software Engineering Intern 2017

- Developed C++ software to store and access genomic data using ROOT big data framework.
- Benchmarked the tools using Python and performed statistical analysis over the parameter space, improving read speed by over 15 times.

University of Michigan, Ann Arbor, Research Assistant 2016

- Developed a machine learning classifier for heart sound classification algorithm based on temporal alignment techniques, MFCC frequency analysis and support vector machines.

Institute for Research in Technology, Madrid, Research Assistant 2014-2015

- Development of applications with Google Glass for people with motor disabilities.

PUBLICATIONS

(*) equal contribution

UNDER REVIEW

Jose Javier Gonzalez Ortiz, John Guttag, and Adrian Dalca
“HyperNetwork Learning via Normalized Parametrizations”
Under Submission (2021).

Jose Javier Gonzalez Ortiz, John Guttag, and Adrian Dalca
“Amortized Learning of Flexible Feature Scaling for Efficient Segmentation Models”
Under Submission (2021).

CONFERENCES AND PEER REVIEWED WORKSHOPS

Jose Javier Gonzalez Ortiz, Jonatham Frankle, Mike Rabbat, Ari Morcos, and Nicolas Ballas
“Trade-Offs of Local SGD at Scale: An Empirical Study”
NeurIPS 2020 Optimization for Machine Learning Workshop (2020).

Jose Javier Gonzalez Ortiz*, Davis Blalock*, Jonatham Frankle, and John Gutttag
“What is the State of Neural Network Pruning?”
Third Conference on Machine Learning and Systems (2020).

Jose Javier Gonzalez Ortiz, Davis Blalock, and John Gutttag
“Standardizing Evaluation of Neural Network Pruning”
AI Systems Workshop at SOSP 2019 (2019).

Jose Javier Gonzalez Ortiz, Daryush D Mehta, Jarrad H Van Stan, Robert Hillman, John V Gutttag, and Marzyeh Ghassemi
“Learning from Few Subjects with Large Amounts of Voice Monitoring Data”
2019 Machine Learning for Healthcare Conference (2019).

Ava Soleimany, Harini Suresh, **Jose Javier Gonzalez Ortiz**, Divya Shanmugam, Nil Gural, John Gutttag, and Sangeeta Bhatia
“Image Segmentation of Liver Stage Malaria Infection”
ICML 2019 Workshop on Computational Biology. 2019.

Jose Javier Gonzalez Ortiz, Cheng Perng Phoo, and Jenna Wiens
“Heart Sound Classification based on Temporal Alignment Techniques”
2016 Computing in Cardiology Conference (CinC). IEEE. 2016, pp. 589–592.

THESES

Jose Javier Gonzalez Ortiz
“Learning from Few Subjects with Large Amounts of Voice Monitoring Data”
S.M. Thesis. Massachusetts Institute of Technology, June 2019.

Jose Javier Gonzalez Ortiz
“A simple power analysis attack on the TwoFish key schedule”
Bachelor Thesis. Universidad Pontificia Comillas ICAI, July 2016.

AWARDS

Qualcomm Innovation Fellowship	2018
la Caixa Foundation Fellowship	2017
Fulbright Scholarship (<i>declined in favor of la Caixa</i>)	2017
Undergraduate Excellence Award U.P.Comillas ICAI	2016
Excellence Scholarship for County of Madrid	2012-2016
International Mathematics Competition, Bronze Medal	2013

ACADEMIC SERVICE

TEACHING

Co-organizer, instructor , The Missing Semester of Your CS Education, MIT	2020
Co-organizer, instructor , 6.HT: Hacker Tools, MIT	2019
Teaching Assistant , 6.S191: Introduction to Deep Learning, MIT	2018

REVIEWER

NeurIPS	2020
MLHC Machine Learning for Healthcare	2020

SKILLS

Languages: Spanish (native), English (fluent)

Machine Learning: PyTorch, TensorFlow, Keras, sklearn

Python: NumPy, SciPy, Pandas, OpenCV

Software: Python, Go, C, Java, SQL