



Elena Gutiérrez

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Objective

Contribute to the solution and communication of the next generation of research challenges in the fields of program analysis and verification, machine learning and natural language processing applications; using my mathematical background and research experience on the theory of formal languages for software verification.

Computer Skills

- C, Python, Octave, Bash, Prolog, HTML, CSS | General experience
- C++, Java | Basic experience
- Git, LaTeX, Keynote
- Mac OS, Linux

Work Experience

IMDEA Software Institute (*Instituto Madrileño de Estudios Avanzados*) Madrid, Spain
Researcher (predoctoral researcher until Sep. 2020) Sep. 2016 - present

National Institute of Informatics Tokyo, Japan
Erato MMSD (Metamathematics for System Design) Project May. 2019 - Nov. 2019
6-months research internship

IMDEA Software Institute Madrid, Spain
3-month research internships summers 2013, 2014 and 2015

Education

Ph.D. in Software, Systems and Computing Univ. Politécnica de Madrid
With *cum laude* distinction Sep. 2016 - Sep. 2020

Double Degree in Mathematics and Software Engineering Univ. Autónoma de Madrid
Average grade: 8.2/10 Sep. 2011 - May. 2016

Courses and Certificates

- Course on Machine Learning by Andrew Ng - Coursera Mar. 2020 - present
- School on Formal Verification - The Hebrew University (Jerusalem) 17 - 21 Dec. 2017
- TOEFL iBT | Test score: 104/120 Feb. 2016

Software Projects

- Genetic algorithm (in C) for the analysis of recurrent neural networks (2020). [GitHub](#)
- Optimization algorithm (in Prolog) for Horn clause programs (2016). [GitHub](#)

Ph.D. Thesis *New Perspectives on Classical Automata Constructions* Sep. 2020

Natural Languages Spanish | Native English | Advanced French | Basic

Volunteer Work and Interests

- Soñar Despierto Foundation: Giving support lessons to high-school students coming from marginalised backgrounds in Madrid (Sep. 2018 - May. 2019)
- AFS Intercultura Spain: Participating in the coordination of intercultural activities with foreign students from exchange programs (Sep. 2011 - May. 2012)
- I love sports, especially running (medium: 10 km, and large distance: 21 km), cycling and paddle tennis.