Alejandro Carderera de Diego

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EDUCATION

08/2018-Present

Georgia Institute of Technology, ISyE. Atlanta, GA, USA.
Ph.D. in Machine Learning. Cumulative GPA: 4.0/4.0
Advisor: Sebastian Pokutta

- Working in convex optimization in the context of machine learning, specifically projection-free optimization.
- Published in AISTATS and ICML

8/2014-7/2016

Cornell University, College of Engineering. Ithaca, NY, USA.
Master of Science in Applied and Engineering Physics. GPA: 4.01/4.3
Henry S. Sack Memorial Award (Academic Performance)

- Drop Electrohydrodynamics (Master's Thesis)

8/2010-7/2014

Universidad Politécnica de Madrid, ETSII. Madrid, Spain.
Bachelor of Science in Industrial Engineering.
Major in Energy Engineering. GPA: 7.7/10

- Mobile frontier problems in the context of the Finite Element Method (FEM) (Bachelor's Thesis)

EXPERIENCE

**7/2020-8/2020
6/2021-8/2021**

J.P. Morgan Chase, Chief Investment Office
Quantitative Research, Summer Associate

- Given excess capital from the firm's operations, studied dynamic optimal strategies to increase shareholder value based on market environment variables
- Devised a stochastic pricing model for the deposit portfolio of the firm that on average is 20% more accurate than the existing model, and is computationally 80 times faster

9/2016-7/2018

HP Inc., Large Format and 3D Printing
R&D Engineer, System integrator

- Solving and analyzing complex development problems at the intersection of mechanical, electrical engineering and computer science
- Development of computer vision tools to automate the quality grading of the products developed
- Performing experiments to improve various aspects of the engineering process and designing machine learning tools to analyze/interpret the data

8/2015-6/2016

Cornell University, College of Engineering
Graduate Research Assistant

- Developed new mathematical scheme for the coupling of the electric field and the Navier-Stokes equations, to simulate electrohydrodynamic phenomena
- Benchmarked solution with the canonical case of a dielectric drop suspended in an electric field

6/2015-8/2015

Tel Aviv University, Department of Materials Science and Engineering
Graduate Research Intern

- Intensive three-month summer internship, characterization of properties of promising photovoltaic materials, employing first-principle atomic simulations

AWARDS

Henry S. Sack Memorial Award: Top Academic Performer (Cornell, 2014-2016)
Research Collaboration Scholarship (Spanish Ministry of Education-2014)
Excellence Scholarship & Top Academic Performer (Autonomous Community of Madrid-2010)

SKILLS

Tools: C++, Python, Fortran, MATLAB, LaTeX, Linux
Languages: Spanish, English, French (intermediate level)