Santiago Cortés-Gómez

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Google Scholar

Education

Carnegie Mellon University — *Pittsburgh, Pennsylvania*
Ph.D. Machine Learning, Advised by Bryan Wilder — July 2022 - Present

Universidad de los Andes — *Bogotá, Colombia*
M.S. Mathematics, GPA 4.6/5.0, salutatorian — July 2018

Universidad de los Andes — *Bogotá, Colombia*
B.S. Mathematics, GPA 4.48/5.0, salutatorian — March 2017

Publications

Inference under constrained distribution shift. Santiago Cortes-Gomez, Mateo Dulce, Bryan Wilder. Inference under constrained distribution shifts. Preprint 2023. [link]

Auditing Fairness by Betting. Ben Chugg, Santiago Cortes-Gomez, Bryan Wilder, Aaditya Ramdas. Neurips 2023 (spotlight). [link]

Alternative Strategies for the Estimation of a Disease's Basic Reproduction Number: A Model-Agnostic Study. Nicolas Paez, Juan F. Ceron, Santiago Cortes-Gomez, et al. Bulletin of Mathematical Biology 2021. [link]

Unsupervised learning for economic risk evaluation in the context of Covid-19 pandemic. Santiago Cortes-Gomez, Yullis Quintero. Machine Learning for the Developing World Workshop, NeurIPS 2020. [link]

Work Experience

Senior Machine Learning Engineer — *April 2021 – June 2022*
Factored
- Developed a meta-learning solution (as part of a team led by ex-Google engineers) that improved performance and reduced training time of computer vision models used in manufacturing and Insurance companies.
- Interviewed candidates for open engineering positions in the company.

Machine Learning Engineer — *October 2019 – March 2021*
Factored
- Built an NLP CRM solution for a fin-tech start-up. The solution included the use of, by that time novel, transformer architecture. The final system allowed to automate the classification of costumer complaints by topic, a task that had been done by employees until our solution was deployed.

Research Engineer — *October 2020 - December 2020*
Universidad EAFIT/Factored
- Led a team that developed an early warning tool for forecasting the economic impact product from the lock-downs during the COVID-19 outbreak.
- The final model was deployed as part of Medellin's town hall COVID-19 monitoring platform and used as an information source for decision makers in the public and private sectors.

Consultant — *June 2020 - December 2020*
Colombian National Institute of Health
- Implemented a novel state-space model to compute the Covid-19 pandemic basic reproduction number in Colombia. The output of the model was used as the official basic reproduction number used by the Colombian Government to measure the contagiousness and transmissibility of the virus at a given time.

Fellow — *May 2019 – September 2019*
Lacuna Fellowship
- Artificial Intelligence and Machine Learning fellowship sponsored by Dr. Andrew Ng's AI fund. During the fellowship, my skills in dynamic programming, graph theory, machine and deep learning were improved by implementing and deploying the models or algorithms described in the most recent computer science papers.

Data scientist — *July 2018 – April 2019*
*Barbara & Frick (*acquired by Accenture Colombia*)*
- Led the team that built the analytics department in a large Colombian CPG company. The team conducted the development of pipelines that gather, curate and serve the data used for performing analytics on every Marketing initiative within the company.
- Presented bi-monthly results to senior executives, the developed solution managed to cut marketing costs while improving the reach of every marketing campaign in the company.

Students representative — *May 2019 – August 2019*
Universidad de los Andes
- Students representative for the Mathematics department.

Talks

XXI Congreso colombiano de matemáticas, June 2017. 20 minute talk
ML4D workshop on Neurips 2020. 20 minute oral presentation

Teaching

Instructor. Lecturer for the Mining Massive Datasets course for the M.S. in data science at Universidad EAFIT.
Teaching assistant. Graduate teaching assistant at Universidad de los Andes for the Linear algebra, Integral Calculus and Differential equations courses.

Volunteer work

Volunteer teacher, **Factored/DataScienceFem.** Taught the basics of machine learning and deep learning to women looking to do a career shift into data related roles.
Volunteer teacher, **Factored.** Taught the basics of machine learning and deep learning to high schools seniors from public schools in Medellín, Colombia.
Volunteer teacher, **Universidad de los Andes.** Helped highschool seniors from under-privileged backgrounds study for their exams to access higher education.