Nicolás Suárez Chavarría

Curriculum Vitae

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Education

2019 - Present	**Stanford University**, *Ph.D. in Economics Candidate*.
2019 - 2021	**Stanford University**, *M.A. in Economics*.
2017 - 2018	**Universidad de Chile**, *M.Sc. in Economics*, Graduated with the highest honors.
2012 - 2017	**Universidad de Chile**, *Business Engineering*, Graduated with the highest honors.
2012 - 2015	**Universidad de Chile**, *B.Sc. in Economics*, Graduated with the highest honors.

Published Papers

2019	**Inequality in social capital in Chile: Assessing the importance of network size and contacts' occupational prestige on status attainment process**, *With Dante Contreras, Juan Díaz and Gabriel Otero*, *Social Networks*, Volume 58, July 2019, pages 59-77.

Working Papers

2021	**Classroom composition and network effects: Evidence from a college special admission program in Chile**.
2018	**The impact of commuting time over educational achievement: A machine learning approach**, *With Dante Contreras, Daniel Hojman, Patricio Rodríguez and Manuel Matas*, Working document number 472, Department of Economics, Universidad de Chile.

Projects

2022	**Predicting asset ownership in Africa using satellite imagery**, *With Othman Bensouda and Edoardo Yin*, Stanford CS229 class project, Code available here .
2022	**Understanding the roles of National and Precolonial Institutions in African development using CNNs**, *With Pascaline Dupas and Zhongyi Tang*.
2021	**Optimized Regression Discontinuity Application: the effect of national institutions over local development** , *Code available here* .
2021	**Predicting Ground-Level Ozone Concentration from Urban Satellite and Street-Level Imagery using Multimodal CNN**, *With Andrea Vallebueno and Nina Prakash*, Stanford CS230 class project, selected as an Outstanding project for the Winter 2021 quarter. Code available here .
2021	**Tutorial: Landsat-8 image download and visualization using Google Earth Engine and Python**, *Code available here*.

Professional and Research Experience

June 2020- Present	**Graduate Research Assistant**, *Prof. Pascaline Dupas*, Stanford University. ■ Make infrastructure access predictions in Africa using satellite imagery and Convolutional Neural Networks. ■ Build a gridded map of Africa with pixel level predictions of access to infrastructure, population density measures, nighttime lights and other development outcomes. ■ Estimate a Spatial Discontinuity Regression model to study the causal impact of national and pre-colonial institutions over local development levels in Africa. ■ Generate data visualizations, maps and tables for our predictions and results.
July 2018- August 2019	**Instructor Professor**, *Department of Economics*, Universidad de Chile. ■ Taught undergraduate level classes. ■ Used web-scrapping techniques to produce an academic productivity dataset of the faculty, with infrastructure to generate automatic productivity reports.
March 2017- Dec. 2018	**Graduate Research Assistant**, *Prof. Dante Contreras*, Universidad de Chile. ■ Used machine learning techniques and the Google Maps API to predict commuting time of middle-school students in Santiago, Chile. ■ Estimated causal inference models to study the impact of commuting time over student's achievement.

Dec. 2015- April 2016	**Junior Economist**, *Chile 21 Foundation*. ▪ Compiled and analyzed data about dock workers in Chile to study how dock workers contracts generated gaps in job quality among them.
Dec. 2014 - Jan. 2016	**Research Assistant**, *Prof. Valentina Paredes*, Universidad de Chile. ▪ Built datasets and estimated econometric models to study the impact of the gender composition of a classroom over the decision of women to major in a STEM-related discipline.

Relevant coursework

Stanford Computer Science, Machine Learning (CS229), Deep Learning (CS230).

Stanford Economics, Intermediate Econometrics I, II and III, Quantitative Methods for Empirical Research, Machine Learning and Causal Inference.

University of Chile Economics, Introduction to Statistics, Statistics Theory, Quantitative Methods I, II, III and IV, Distributive Analysis of Micro Data using Stata, Topics in Applied Economics, Graduate Econometrics I, II and III, Microeconometrics.

Honors and Awards

2019	**Best Graduated in Economics**, School of Economics and Business, Universidad de Chile, Award handed by the School of Economics and Business to the student with the highest GPA among the M.Sc. in Economics who graduated in 2018.
2019	**Membership in The Beta Gamma Sigma International Business Honor Society**, School of Economics and Business, Universidad de Chile, Membership awarded in recognition of high scholastic achievement.
2018	**School Spirit Award**, School of Economics and Business, Universidad de Chile, Award handed by the Alumni association to one student with an outstanding academic performance, who also worked in extracurricular activities that had a positive impact over the community.
2015-2017	**Honor Board**, School of Economics and Business, Universidad de Chile, Awarded to students in the first percentile of academic performance.
2013-2014	**Circle of Excellence**, School of Economics and Business, Universidad de Chile, Awarded to students in the first 5 percentiles of academic performance.

Programming skills

LATEX, *advanced level*.

Stata, *advanced level*.

MATLAB, *intermediate-advanced level*.

Python, *experience with machine learning, data manipulation, social networks and webscrapping packages*.

R, *beginner-intermediate level, experience with GIS packages*.

SQL, *beginner level*.

TensorFlow, *beginner level*.

Pytorch, *beginner-intermediate level*.

Google Cloud, *basic experience with cloud computing and usage of the Google Maps and StreetView APIs*.

Google Earth Engine, *basic experience working with satellite images*.