

Antonio Aguirre

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EDUCATION

Ph.D. in Statistics | University of California, Santa Cruz (UCSC) June 2026 | 3.82/4
M.Sc. in Economics | Instituto Tecnológico Autónomo de México (ITAM) Dec 2020 | 96.7/100
B.Sc. in Applied Mathematics | Instituto Tecnológico Autónomo de México (ITAM) Dec 2018 | 97.1/100

EXPERIENCE

University of California, Santa Cruz | Statistics Department 2024 - | Santa Cruz, CA

Computer Systems Coordinator

- Manage and maintain Linux servers for the Statistics Department, performing system upgrades, partitioning, software installations, and issue resolution to support faculty and graduate research.
- Collaborate with UCSC IT to align resources with departmental needs, ensure compliance with university standards, and facilitate technical support.
- Act as a technical resource for faculty and students, advising on server usage, resource allocation, and troubleshooting.

NeatLeaf Inc. 2021 - 2022 | Scotts Valley, CA

Data Analyst

Python, Git, BitBucket, Bash, Linux, SQL, C++, DBeaver

- Built a data pipeline for the automatic storage and process of real-time microclimate measurements made by the robots in the greenhouses.
- Developed a spatiotemporal statistical model for air anomaly detection in all greenhouses.
- Made data analysis and diagnosis of the robot's mechanical performance.
- Calibrated the robots' temperature, humidity, and CO2 sensors (BME680 and SCD41).
- For every task, produced accessible weekly reports.
- For every task, produced code following Google Coding Standards.

Banco de Mexico (CONACYT) 2018 - 2019 | Mexico City, Mexico

Data Analyst

Python, R, Git, SQL

- Built a data pipeline for bill images.
- Developed Statistical and ML models for bill anomaly classification.
- Developed Time Series models for Stocks' Volumes prediction.
- Developed tools for model diagnosis and model selection.
- For every task, produced biweekly reports.

ACADEMIC EXPERIENCE

University of California, Santa Cruz 2021 - 2023 | Santa Cruz, CA

Teacher Assistant

Python, R

- Introduction to Statistics (STAT5): F21, W22, S22, F22, S23, Summer23, F23
- Statistical Methods for the Biological, Environmental, and Health Sciences (STAT7): W23, F23
- Introduction to Probability Theory (STAT131): W24

American Statistical Association: Data Fest 2023 | Fresno, CA

Mentor

R, Python, Matlab, STATA

- Advise multiple teams on modeling, coding, and data visualization.
- Provide commentary on individual team performance.

CONACYT: Ignacio Lobato 2019-2021 | Mexico City, Mexico

Research Assistant

Matlab, C

- Built a data pipeline for several stock market volumes (Dow Jones Index Members), country-level interest rates (USA and Mexico), and country-level real capital stock (OCDE members).
- Developed code for automatic data processing
- Developed code for preliminary time series diagnosis: plots, hypothesis testing, and numerical summaries.
- Developed econometric model for non-fundamental time series detection.
- Created tables for numeric summaries of the model results.
- After submitting the article to the journal, referees' recommended modifications were performed.
- Published article: "Single step estimation of ARMA roots for nonfundamental nonstationary fractional models"

Levent Ulku

2018-2019 | Mexico City, Mexico

Research Assistant

- Developed rhetorical framework for modeling and characterizing choice correspondences among lists.

Instituto Tecnológico Autónomo de México

2015 - 2019 | Santa Cruz, CA

Teacher Assistant

Python, R, Matlab

- Basic, Intermediate, and Advanced Macroeconomics
- Basic, Intermediate, and Advanced Microeconomics
- Probability Theory
- Real Analysis, and Convex Analysis

RECENT RESEARCH

Aguirre, A., Lobato, I.N.

Evidence of non-fundamentalness in OECD capital stocks.

Published in *Empirical Economics*, 67, 761–772 (2024).

Aguirre, A., Sanso, B., Prado, R.

A Bayesian Quantile-Based Correction and Synthesis of River Flow Forecasts

Submitted to *Journal of Agricultural, Biological, and Environmental Statistics (JABES)* in December 2024.

PhD Candidate (Advised by Bruno Sanso & Raquel Prado)

Real-Time Bayesian Quantile-Based Correction and Synthesis of Climate Agency Products.

FELLOWSHIPS

Bailleres Fellowship: B.Sc.

50% of total tuition, (2014-2018)

Bailleres Fellowship: M.Sc.

100% of total tuition, (2014-2018)

UC Regents Fellowship

Department of Statistics, (2021)

UCSC Summer Research Fellowship:

Department of Statistics, (2024)

TLC Graduate Pedagogy Fellowship - Pedagogical Leadership Certificate

Center for Innovations in Teaching and Learning (CITL), (2023-2024)

TLC Graduate Pedagogy Summer Fellowship

Teaching Assistant Training Wiki, (Summer 2024)

TLC Graduate Pedagogy Fall Fellowship

Teaching Assistant Training Workshops, (Fall 2024)

SCHOLARSHIPS

University of Washington & NSF

Summer at Institute in Statistical Genetics (SISG), (2022)

University of Washington & NSF

Summer at Institute in Statistics and Modeling in Infectious Diseases (SISMID), (2022)

SKILLS

Languages:

English, Spanish, German

Programming Languages:

R, Python, SQL, Matlab, AMPL, STATA, Eviews, Latex, Java, C, C++, Git, Bash, VIM

Technologies & Tools:

Tableau, SAS, Stan, Torch

Certifications:

”Professional Communication Certificate Program (PCCP)”, by UCSC, Fall 2021

”Fundamentals of Causal Inference: With R”, by ASA/Genentech, Summer 2023