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About

Economist and Physicist interested in applying Data Science, Machine Learning, Data Analytics, Computational and Mathematical Modelling to create value from data.

Education

Universidad de los Andes, Colombia.
B.S. Physics, (last semester).
GPA: 4.37/5.00.

Universidad de los Andes, Colombia.
B.S. Economics, 2016.
GPA: 4.37/5.00.

Honors and Awards

Universidad de los Andes.
Quiero Estudiar Scholarship for academic excellence to course undergraduate studies.
2011

Experience

Banco de la República, Central Bank of Colombia.
Economist & Research Assistant at Macroeconomics Modelling Department.
• Developer of forecasting and predictive models for Monetary Policy analysis using DSGE's, Machine Learning, Bayesian Statistics and Time Series Econometrics.
• Research Assistant in the development and implementation of High Dimensional DSGE models for Monetary Policy and Sovereign Debt analysis using High Performance Computing tools like parallel computing (MPI, OpenMP), main scientific libraries (LAPACK, BLAS, LINPACK) and sparse grids methods on Fortran and C++.
August, 2016 - Now.

Universidad de los Andes.
Teaching Assistant. Computational Methods.
Teaching Assistant in Computational Methods for bachelor in Physics using python and C to teach interpolation methods, differential equations solutions, PCA, Fourier analysis, numerical differentiation and integration and Monte Carlo methods.
August, 2015 - December, 2015.

Banco de la República, Central Bank of Colombia.
Intern at Macroeconomics Modelling Department.
Development and implementation of computational macroeconomic models using dynamic programing, global methods solution, Fortran, C and High Performance Computing (HPC) techniques as Parallel Computing and Distributed and Shared Memory in order to improve code performance efficiency.
January, 2015 - December, 2015.

Universidad de los Andes.
Teaching Assistant, Instructor.
Academic instruction in the guidance of the learning process of first year students of Economics, Science and Engineering majors for the Microeconomics, Econometrics and basics physics courses.
January, 2014 - November, 2014.

Computer Skills

Fortran, C, C++, R, Java, Shell, Git, SQL.

Python: Pandas, Sklearn, Matplotlib, Seaborn, Plotly, NumPy, Jupyter.

MPI, OpenMP, BLAS, LAPACK, LINPACK.

Matlab/Octave, Stata.

Languages

Spanish (Native), English (Fluent), Chinese (Basic).