Artur Bezerra de Carvalho

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Education

University of Chicago, PhD Economics 2021

Thesis Project: "Corporate Debt Standardization and The Rise of Electronic Bond Trading"

Getulio Vargas Foundation, MA Economics 2010

Federal University of Rio de Janeiro, UFRJ, BA Economics 2008

Data Science Experience

Seaport Global Holdings LLC — May to August 2017

Junior Data Scientist Intern - Algorithmic Trading Technology — New York, NY

- Participated in development of electronic corporate bond trading programme for US market;
- Produced reports documenting the firm's data sources and describing the identification and processing of relevant trading data and proprietary variables;
- Assisted the data engineering group validate their implementation in Java of the data science team's pricing algorithms written in Python.
- Wrote code to identify whether bonds belonged to a particular IG corporate bond index;
- Deployed simple Machine Learning classification algorithms to impute missing data.

Research Experience

University of Chicago, PhD Dissertation — 2021

Advisor: Prof. Pietro Veronesi

- Developed structural model of credit risk to analyze trade-off between informational costs and liquidity gains associated with standardization of electronically traded bonds;
- Employed computational methods in Python and Julia, including multivariate interpolation, grid search and parallelization in remote machines, to solve the infinite-horizon model.

MIT Sloan School of Management — February to June 2016

Research Assistant to Professor João Granja

- Leveraged data on regulatory reports to assess the impact of heightened capital requirements on bank activity;
- Studied how *de novo* banks' asset growth, residential mortgage credit concession and securitization change in response to loosened leverage ratio requirements.

Teaching & Other Experience

University of Chicago — Fall 2013 to Spring 2021

Teaching Assistant: Booth (MBA), Financial Mathematics (MS), Dept. of Economics (BA)

- Conducted in-person and online sessions covering course material, programming skills, assignments and exam solutions. Wrote teaching notes, solutions to problem sets and exams;
- Courses: *Fintech Revolution*, *Financial Derivatives*, *Option Pricing*, *Time Series Econometrics*, among others.

Getulio Vargas Foundation - EPGE — Summer 2009

Teaching Assistant, MA, Macroeconomics II

Banco BBM (former Bank of Bahia) — May to Dec 2006

Internship - Corporate Credit Area — Rio de Janeiro, Brazil

Honors & Awards

The University of Chicago Social Sciences Fellowship, 2010-15

Brazilian government fellowship for Master's Studies, 2008-10

Computer Skills

Julia, Python, Matlab, R, Stata, LaTeX, MS Office

Additional Information

Language Skills: English (fluent), Portuguese (native), Spanish (conversational)

Citizenship: Brazilian (J1 U.S. Visa)

Website: https://abcarvalho.github.io/