Vítor Furtado Farias

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EDUCATION

University of Notre Dame du Lac — Notre Dame, Indiana
Bachelor of Science in Mathematics. **Double Major:** Honors Economics. **GPA:** 3.921 — Aug 2018 – May 2022
Recipient of President's Circle Full Scholarship

EXPERIENCE

The Wharton School — Philadelphia, Pennsylvania
Research Associate in Finance — *Aug 2022 – Present*

Work with Professor João Gomes and Professor Luke Taylor in Macro-Finance and Corporate Finance.

- Administered a 5 TB state-of-the-art homotopy project measuring multiple equilibria industry dynamics under financial frictions; Examined all of COMPUSTAT in R to identify and study duopolies facing credit constraints during the Great Financial Crisis.
- Managed resources in the High-Performance Computing Cluster to estimate financial institutions' portfolio tilts relative to stocks' ESG characteristics; Provided regression and visual analyses of ESG tilts at the aggregate and institutional levels.
- Coded an adaptable Empirical Bayes Shrinkage algorithm in STATA using *frames*, designed to enhance operational efficiency.
- Reproduced multiple New Keynesian models in Dynare, comparing diverse approaches for introducing financial frictions.
- Investigated historical deviations from Fed's Taylor Rule, focusing on the active response to credit spread movements.
- Selected finance publications for Wharton's newsletter *A Bite of Finance*, concisely summarizing each paper.

University of Notre Dame, Department of Economics — Notre Dame, Indiana
Research Assistant in Economics — *May 2020 – May 2022*

Worked with Professor Eric Sims and Professor Christiane Baumeister, mainly in topics in Macroeconomics.

- Developed a Python data scrapper for 31 high-frequency US indicators; Programmed it for automatic weekly updates.
- Designed an intuitive dashboard in Tableau to publish weekly economic condition indicators at the national and state levels.
- Created a CV Parser in Python to evaluate the reputation of the Top 3 Finance Journals versus the Top 5 Econ Journals.
- Delved into financial statements of top American universities, identifying anomalies in their endowment management in recessions.

University of Notre Dame, Department of Mathematics — Notre Dame, Indiana
Mathematics Tutor and Teaching Assistant — *Jan 2020 – May 2022*

- TA'ed for Intro to Math Reasoning and Ordinary Differential Equations, grading assignments, and conducting office hours.
- Tutored in the Math "Proofs" Bunker Help Room, helping students taking upper-level math courses.

BTG Pactual Investment Bank — São Paulo, São Paulo, Brazil
Operations Summer Analyst — *May 2019 – Aug 2019*

- Developed VBA algorithms for revenue control in the area of Futures and Equities. (Estimated time saved: 150h/month).
- Re-engineered the SQL database of Futures and Equities to introduce new products into the system.

RESEARCH

Independent Senior Thesis: Explaining Economic Fluctuations in Brazil with a Weekly Index (available online)
Advisor: Christiane Baumeister

- Designed and developed in Python the first high-frequency economic index for Brazil, using 27 different data series that cover diverse categories of the Brazilian economy (e.g. labor market, mobility, energy, etc.).
- Applied a dynamic factor model in MATLAB to evaluate each series' predictability of Brazilian growth.
- Conducted statistical analysis on recent economic turmoil, such as the COVID crisis and the 2014-2016 political crisis.

TECHNICAL SKILLS

Languages	:	Portuguese (Native), English (Fluent), Spanish (Intermediate), French (Beginner)
Proficiency	:	Python, C++, R, STATA, MATLAB, Tableau, SQL, Git, LaTeX, and VBA
Graduate Coursework	:	Wharton: Financial Economics (A+), Intertemporal Macro-Finance (Pending)
		Notre Dame: Econometrics I (A), Microeconomic Theory I (A-)
Math Coursework	:	Real Analysis, Topology, Probability, Statistics, Operation Research, Algebra,
		Numerical Analysis, Math Methods in Financial Economics, Problem Solving,
		Stochastic Processes, ODE (All As)

HONORS & GRANTS

- Senior Award of Excellence: The Haaser Scholarship in Mathematics
- Notre Dame Economics Research Grant – $5000 Award
- Undergrad Entrance Exams: 1st place at FGV-Rio Economics
- Fundacao Estudar Fellowship: Prep Estudar Fora
- Brazilian High School Team Chess Championship 2016: 1st Place (Captain)