

# Jorge Novoa Contreras

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## Education

### University of Chile

Bachelor of Science in Engineering, major in Mathematics

Mathematical Civil Engineering

Master of Engineering Sciences, major in Applied Mathematics

Santiago, Metropolitan Region

2020 – 2024

2020 – 2025

2025 – 2026

## Experience

### RialStat

Santiago, Metropolitan Region

#### Intern

- I completed my Professional Internships I and II at RialStat during the periods January–February 2023 and December 2023–February 2024.
- *Professional Internship I*: I participated in both the review and validation of databases and in the development of statistical and macroeconomic models. In particular, I had the opportunity to incorporate and build predictive models for short-term forecasting of relevant agents within the national economy.
- *Professional Internship II*: I worked on the construction of investment portfolios through research and application of statistical models and artificial intelligence, focusing on predicting the assets that make up these portfolios.

### CMM

Santiago, Metropolitan Region

#### Selection Reviewer at IMMC 2024

Nov. 2023 – Dec. 2023

- The International Mathematical Modeling Challenge is an annual international team competition in mathematical modeling. My role was to participate in the selection process of the teams that would represent Chile, carried out by the Center for Mathematical Modeling (CMM).

### University of Chile

Santiago, Metropolitan Region

#### Research Intern

Dec. 2024 – Feb. 2025

- During my Professional Internship III, focused on theoretical research, I deepened my study of nonlinear differential equations, particularly on the existence of periodic solutions for systems with  $\phi$ -Laplacian type operators, operators with variable exponents, among others, all under the supervision of Professor Raúl Manásevich.

#### Assistant Instructor

2022 – 2025

- Problem-solving sessions and tutoring for students in the following courses from the Department of Mathematical Engineering: *Multivariable Calculus*, *Ordinary Differential Equations*, *Laboratory: Enhancing your Mathematical Skills* and *Nonlinear Analysis*.

#### Teaching Assistant

2022 – 2025

- Grading quizzes, tests, and exams for the following courses from the Department of Mathematical Engineering: *Multivariable Calculus*, *Differential and Integral Calculus*, *Complex Variables and Special Functions*, *Linear Algebra*, and *Advanced Calculus and Applications*.

## Skills

**Programming:** Python (Intermediate), R (Intermediate)

**Languages:** Spanish (Native), English (B2)