

Igor Lucindo Cardoso

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Rio de Janeiro, RJ

OBJECTIVE

PhD student eager to contribute to advancements in Industrial Engineering, with a focus on process optimization, and automation. Seeking to integrate expertise in engineering and mathematical modeling to tackle complex problems in industrial environments.

EDUCATION

2025 - Present	Ph.D. in Industrial Engineering, Texas Tech University (TTU) <ul style="list-style-type: none">Research interests: Optimization, Mixed-Integer Programming (MIP), Graph Theory. GPA: 4.0/4.0
2023 - 2024	M.A. Courses in Mathematical Modeling, Getulio Vargas Foundation (FGV) <ul style="list-style-type: none">Relevant coursework: Measure Theory, Probability Theory
2020 - 2024	B.S. in Electronic Engineering, Military Institute of Engineering (IME) <ul style="list-style-type: none">IME is the oldest and one of the best ranked engineering schools in Brazil. GPA: 8.25/10

PUBLICATIONS

Cardoso, Igor , Teodoro, Gabriel, and Validi, Hamidreza (to be submitted December 2025). A GPU-Accelerated and Interpretable Polynomial-Time Approach for Solving Wordle . To be submitted to <i>Operations Research (OR)</i> .
Cardoso, Igor , Gomes, Carlos, Rosa, Paulo F.F. and da Fonseca, Vinicius Prado (2024). Comparing Pre-Trained Object Detection Models for Autonomous Grasp on Affordable Prosthetic Hands . In: <i>MeMeA 2024 - IEEE Medical Measurements & Applications</i> .

RESEARCH EXPERIENCE

Research Assistant, Texas Tech University (TTU)	2025 – Present
<ul style="list-style-type: none">Conducting doctoral research in Industrial Engineering, focusing on optimization, Mixed-Integer Programming (MIP), and graph theory, with ongoing work aimed at publication in leading optimization journals.Advisor: Dr. Hamidreza Validi.	
Research Experience for Undergraduates at Memorial University of Newfoundland (MUN)	2023
<ul style="list-style-type: none">Exchange Program, BioInspired Robotics Lab. Contributed to machine learning, computer vision, and robotics, focusing on system optimization and autonomy. Developed prosthetic hand with autonomous grasping.Project Advisor: Dr. Vinicius P. da Fonseca.	

HONORS & AWARDS

Student Chapter Annual Award (Cum Laude), INFORMS	2025
1st place in "The Road to 2050" competition, Shell Eco-marathon Team	2021
5th place in Petrobras Challenge, Latin American Robotics Competition, RoboIME	2021
Gold Medal, Brazilian Mathematical Olympiad of Public Schools (OBMEP)	2018
Silver Medal, Brazilian Mathematical Olympiad of Public Schools (OBMEP)	2019

EXTRACURRICULAR EXPERIENCE

INFORMS Student Chapter, Texas Tech University	2025 – Present
<ul style="list-style-type: none">Active member engaging with the research community in Industrial Engineering.Attended seminars and collaborated with peers to strengthen knowledge in optimization and operations research.	
Journal Club, Texas Tech University	2025 – Present
<ul style="list-style-type: none">Presenter in Journal Club sessions, discussing and analyzing peer-reviewed research in Industrial Engineering.	
American Airlines Scheduling Project	2025
<ul style="list-style-type: none">Developed mixed-integer programming models to optimize aircraft scheduling for American Airlines.	
Shell Eco-marathon Team	2021 – 2023

- Participated as a team member in the Shell Eco-marathon, focusing on sustainable engineering solutions.

Robotics Club - RoboIME

2021 – 2023

- Active member of the Robotics Club at Military Institute of Engineering.
- Contributed to projects involving machine learning and computer vision.

Mathematics Club

2017 – 2019

- Engaged in mathematical problem-solving sessions and competitions in High School.

SKILLS

Programming	Python, C/C++, Matlab, Julia, JavaScript, HTML, CSS, FPGA
Tools	Gurobi, Cuda, Git, \LaTeX , ROS, Arduino, Cloud Firestore
Languages	Portuguese (native), English (fluent), French (intermediate)
Relevant Courses	Network Optimization, Measure Theory, Probability Theory, Machine Learning, Introduction to Algorithms.

REFERENCES



Dr. Hamidreza Validi (advisor) - hvalidi@ttu.edu



Dr. Vinicius P. da Fonseca (advisor) - vpradodafons@mun.ca