Igor Lucindo Cardoso

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Professional Summary

- Research focus on operations research, MIP, graph theory, and GPU-based optimization.
- Published work at IEEE conferences; ongoing research applying GPU computing to optimization.
- Strong foundation in electronic engineering and programming (Python, C/C++, Matlab, Julia).
- Active contributor to professional and research communities.

Education

Texas Tech University (TTU) 2025 – Present
Ph.D. in Industrial Engineering GPA: 4.00/4.00
Research: Optimization, MIP, Graph Theory

Getulio Vargas Foundation (FGV) 2023 – 2024
M.A. Courses in Mathematical Modeling

Military Institute of Engineering (IME) 2020 – 2024
B.S. in Electronic Engineering GPA: 8.25/10.00

Research Experience

Research Assistant, Texas Tech University (TTU) 2025 – Present

- Conducting research in optimization, MIP, and graph theory, with ongoing work aimed at publication in prestigious optimization journals. Developed a GPU-accelerated and interpretable algorithm for solving Wordle. (Manuscript: *A GPU-Accelerated and Interpretable Approach for Solving Wordle*, to be submitted to *Operations Research*, Dec 2025.)
- Advisor: Dr. Hamidreza Validi.

Research Experience for Undergraduates, Memorial University of Newfoundland (MUN) 2023

- Contributed to machine learning, computer vision, and robotics in the BioInspired Robotics Lab. Developed a prosthetic hand with autonomous grasping. (Publication: Comparing Pre-Trained Object Detection Models for Autonomous Grasp, *IEEE MeMeA 2024*)
- 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 and Silver Medals, Brazilian Mathematical Olympiad of Public Schools (OBMEP) 2018 – 2019

Professional Affiliations & Activities

INFORMS Student Chapter, Texas Tech University 2025 – Present

- Active member engaging in seminars, discussions, and collaborative research in optimization and Operations Research.

Journal Club, Texas Tech University 2025 – Present

- Presenter in Journal Club sessions, discussing and analyzing peer-reviewed research in Operations Research.

American Airlines Scheduling Project 2025

- Developed mixed-integer programming models to optimize aircraft scheduling for American Airlines.

Robotics Club – RoboIME 2021 – 2023

- Worked on projects involving machine learning and computer vision.

Shell Eco-marathon Team 2021 – 2023

- Team member developing sustainable engineering solutions.

Skills

Programming	Python, C/C++, Matlab, Julia, Java, JavaScript, HTML, CSS, FPGA
Tools	Gurobi, Cuda/GPU, Git, LaTeX, Linux, NetworkX, ROS, OpenCV, Arduino, Cloud Firestore
Languages	Portuguese (native), English (fluent), French (intermediate)