

# Igor Lucindo Cardoso

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## PROFESSIONAL SUMMARY

- Research focus on optimization, Mixed-Integer Programming (MIP), and graph theory.
- Hands-on experience in mathematical modeling, machine learning, and robotics.
- Published work presented at IEEE conferences.
- Strong foundation in electronic engineering and programming (C/C++, Python, Matlab, Julia).
- Active contributor to professional and research communities.

## EDUCATION

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|--|--------------------------------|
| <b>Texas Tech University (TTU)</b><br>Ph.D. in Industrial Engineering<br>Research: Optimization, MIP, Graph Theory | 2025 – Present<br>GPA: 4.0/4.0 |
| <b>Getulio Vargas Foundation (FGV)</b><br>M.A. Courses in Mathematical Modeling                                    | 2023 – 2024                    |
| <b>Military Institute of Engineering (IME)</b><br>B.S. in Electronic Engineering                                   | 2020 – 2024<br>GPA: 8.29/10    |

## RESEARCH EXPERIENCE

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|--|----------------|
| <b>Research Assistant, Texas Tech University (TTU)</b>   | 2025 – Present |
| <ul style="list-style-type: none"><li>• Conducting research in optimization, MIP, and graph theory, with ongoing work targeted for publication in leading optimization journals.</li><li>• Advisor: Dr. Hamidreza Validi.</li></ul>  |                |
| <b>Research Experience for Undergraduates, Memorial University of Newfoundland (MUN)</b>   | 2023           |
| <ul style="list-style-type: none"><li>• 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, <i>IEEE MeMeA</i> 2024)</li><li>• Advisor: Dr. Vinicius P. da Fonseca.</li></ul> |                |

## 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

|  |                |
|--|----------------|
| <b>INFORMS Student Chapter, Texas Tech University</b>  | 2025 – Present |
| <ul style="list-style-type: none"><li>• Active member engaging in seminars, discussions, and collaborative research in optimization and operations research.</li></ul> |                |
| <b>Journal Club, Texas Tech University</b>   | 2025 – Present |
| <ul style="list-style-type: none"><li>• Presenter in Journal Club sessions, discussing and analyzing peer-reviewed research in Industrial Engineering.</li></ul>       |                |
| <b>Robotics Club – RoboIME</b>   | 2021 – 2023    |
| <ul style="list-style-type: none"><li>• Worked on projects involving machine learning and computer vision.</li></ul>   |                |
| <b>Shell Eco-marathon Team</b>   | 2021 – 2023    |
| <ul style="list-style-type: none"><li>• Team member developing sustainable engineering solutions.</li></ul>  |                |

## SKILLS

|             |   |
|-------------|---|
| Programming | Python, C/C++, Matlab, Julia, JavaScript, HTML, CSS, FPGA                         |
| Tools       | Gurobi, Cuda, Git, L <sup>A</sup> T <sub>E</sub> X, ROS, Arduino, Cloud Firestore |
| Languages   | Portuguese (native), English (fluent), French (intermediate)                      |