Igor Carpanese

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Education

Universidade Federal do Rio de Janeiro

B.Sc. in Computer Science   *2013 - 2018*
- Member of the competitive programming study group. Represented the university at the ICPC World Finals 2018 in Beijing.
- Teaching assistant in "Number Theory & Cryptography", "Theory of Computation", and "Algorithms & Graphs" classes.
- Grade: 8.9/10

Professional Experience

World Bank   *Brasília (remotely)*

Researcher   *Sep 2019 - PRESENT*
- Designed data mining algorithms and network analysis to identify corruption risk flags in Brazilian public procurement, among conflicts of interest, collusion, and companies whose partners are beneficiaries of conditional cash transfer programs.
- Managed the implementation of a decision support system to identify potential wasting in Brazilian federal government spending. Designed algorithms to extract efficiency, economy, and competitiveness features from more than R$ 1 trillion analyzed.

International Monetary Fund   *Washington, D.C. (remotely)*

Researcher   *Aug 2020 - Jun 2021*
- Designed data mining algorithms to identify potential shell companies bidding in Brazilian public spending procurement.
- Implemented network algorithms to detect beneficial ownership of those potential shell companies.

Publications

A decision support system for fraud detection in public procurement

Author   *May 2020*
- The paper describes a decision support system and the algorithms for fraud detection in Brazilian public procurement using open data worth over US$ 50 billion in contracts.
- https://dx.doi.org/10.1111/itor.12811

Honors & Awards

International

| 2018 | **Ranked 56nd out of 140 teams**, ACM ICPC – World Finals | *Beijing* |

National

| 2017 | **Bronze Medal, ranked 8th out of 72 teams**, ACM ICPC – Brazilian Finals | *Foz do Iguaçu* |
| 2016 | **Bronze Medal, ranked 8th out of 58 teams**, ACM ICPC – Brazilian Finals | *Belo Horizonte* |