

# Daniel Oliveira

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## EDUCATION

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### University of Waterloo – Waterloo ON, Canada

Master of Mathematics in Combinatorics and Optimization

May 2020

Relevant Coursework: Approximation Algorithms, Computational Discrete Optimization, Integer Programming, Big Data and Integer Programming, Convex Optimization.

### Universidade Federal Fluminense – Niteroi RJ, Brazil

M.Sc. in Industrial Engineering with emphasis in Operations Research

Dec 2015

B.Sc. in Industrial Engineering

Aug 2013

## EXPERIENCE

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### RideCo – Waterloo ON, Canada

Software Engineer in Algorithms and Optimization

Jul 2020 – Oct 2020

- Experimented with new optimization algorithms and code optimizations.
- Implemented new business rules in the Python optimization engine.
- Reviewed and tested code.

### University of Waterloo – Waterloo ON, Canada

Teaching Assistant

Sep 2017 – Apr 2020

- Courses: Deterministic Operations Research Models and Introduction to Optimization.

### Setra Solucoes (Fixed Asset Management Consulting) – Niteroi RJ, Brazil

Full Stack Developer

Aug 2014 – Apr 2015

- Implemented a web application to support the accounting of physical assets, tailored to the needs of Brazilian hydro companies.
- The application was developed using PHP (CodeIgniter framework), MySQL and HTML/CSS/Javascript and deployed using AWS EC2.

### Ekons Consultoria – Rio de Janeiro RJ, Brazil

Business Intelligence Analyst

Apr 2013 – Jan 2014

- Developed Management Dashboards using MS Excel, MS Access and VBA. Automated diverse tasks using the same.
- Developed a Sales Pipeline application using Excel and VBA.
- Mapped processes using MS Visio and Bizagi Modeler.
- Conducted Excel and VBA training.

## SKILLS

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C++, Python, PyCharm, Django, VBA, Java, MS Excel, MS Access, SQL, TensorFlow, PyTorch, IBM CPLEX, AWS, PHP, MySQL, Git, Jira, Confluence, Gerrit, Unit tests, Regex, Matlab, Minitab, Multithreading (OpenMP), Mathematical Optimization, Linear Programming, Metaheuristics, Machine Learning, Deep Learning, Problem Modelling, Database Modelling, Data Extraction, Processing, Visualization and Analysis, Computational Experiments, Academic Research.

## PUBLICATIONS

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D. Oliveira and A. Pessoa. An Improved Branch-Cut-and-Price Algorithm for Parallel Machine Scheduling Problems, *Informatics Journal on Computing*, 2019.

## PROJECTS

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Kaggle's Santa's Stolen Sleigh Optimization Challenge, 2015. Placed 11<sup>th</sup> of 1127 teams.

Maintainer of the Capacitated Vehicle Routing Problem Library, <http://vrp.atd-lab.inf.puc-rio.br> (Django backend).