

# Bruno Gomes Coelho

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## EDUCATION

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- **New York University (NYU)** Brooklyn, NY, USA  
*PhD in Computer Science focused on Machine Learning* Set. 2020 – Jun. 2025 (predicted)
  - **Relevant classes:** Probability for DS, ML, DL, Algorithmic ML and DS
- **New York University (NYU)** Brooklyn, NY, USA  
*Master's in Computer Science* Set. 2020 – May. 2022
- **University of São Paulo (USP), ICMC** Campus of São Carlos, Brasil  
*Bachelor's degree in Computer Science; Emphasis in Data Science; GPA: 8.8/10.0* Fev. 2016 – Jan. 2020

## INDUSTRY EXPERIENCE

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- **Consulting with The AI Academy** Remote  
*Data Scientist* May 2020 - Oct 2020
  - **Continuous Development for DS:** Prototyping and evaluating new DS processes and tools for use in the finance sector with client being one of Brazil's biggest banks.
  - **DevOps:** Integrating H2O Driverless AI into automated CD pipelines.
- **Imaflora Origens** Brazil  
*Data Scientist* Feb 2020 - July 2020
  - **ETL:** Data wrangling business and Geo-spatial data from different sources for a interactive visualisation.
  - **Visualisation:** Building a interactive platform for exploring new data-driven insights. Working alongside business owners to visualise and understand the impact of social programmes.
- **University of São Paulo, ICMC** Brazil  
*Research Assistant - international scholarship by USAID* Mar 2017 - Dez 2019
  - **Processing:** Transformed raw audio data (mosquito's wingbeats) into structured data using time series analysis.
  - **Classifying:** Building pipelines and evaluating models to classify different insect species.
  - **Undergraduate thesis:** Applying CNNs to raw audio data for insect classification; Analysing covariate shift in the context of sensor generalization.
- **Getúlio Vargas Foundation (FGV) and Imaflora** Brazil  
*Data Scientist* Aug 2019 - Dez 2019
  - **Data Processing:** Integration of multiple government systems related to timber exploration data.
  - **Illegal Exploration:** Developing a django/D3 visualisation tool to facilitate the discovery of anomalous data.
- **Birdie** Brazil  
*Data Science Intern* Aug 2018 - Fev 2019
  - **Data Acquisition and Mining:** Acquired more than 1 million e-commerce products through crawlers, building a reliable back-end infrastructure; Extraction of useful features from the unstructured textual data of the products.
  - **Machine Learning:** Building hierarchical models for product category classification
  - **Production:** Deployed the models as micro-services processing 10 million+ daily products.

## MAJOR PROJECTS

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- **Winner of the Dotz NLP Competition** May 2020 - July 2020
  - **Competition:** Hierarchical classification of e-commerce products from their description.
  - **Solution:** Building a integrated pipeline using a mixture of portuguese Bert, Character CNNs, traditional sparse BOW model and hierarchical specific models.
- **Finalist of the Data Science Games 2018** May 2018 - Set 2018
  - **Qualification Phase - Kaggle competition:** Analysed the bond market with data provided by BNP Paribas; Predicted customer interest in a bond using diverse data, from customer data to international market information; Final result in the top 30 worldwide from 220 participating universities, guarantying a place in the final.
  - **Final:** Used e-commerce data to help predict customer interest in online shopping.
- **Co-founder of DATA - Extracurricular Data Science Group** September 2018 - Jan 2020
  - **Co-Founder:** Creating and running a extracurricular data science group recognised by the university.
  - **Teaching:** Weekly classes teaching basic Machine Learning concepts and frameworks to a class of 30 students.

## TECHNICAL SKILLS

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**Languages:** Python, SQL, C, JavaScript, Java

**DS/ML/Viz:** SciPy, Scikit-Learn, Pandas, Jupyter, PyTorch, TensorFlow, DVC, Seaborn, D3, Plotly Dash

**Others:** BeautifulSoup, Scrapy, Django, Git, Docker, Airflow, Driverless AI

## AWARDS

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- Winner of the Dotz NLP Competition - Alongside a team member, achieved first place building hierarchical Portuguese NLP models from 80 participating teams.
- Finalist of the Data Science Games 2018 - one of the 20 best teams, from 400 participating teams, representing 220 universities across 46 countries.
- Silver medal on Elo's Merchant Category Recommendation on Kaggle. Over 4000 teams of 1-4 people took part.
- 19th place at Data Mining Cup, from 149 Teams from 114 universities in 28 countries - Best team from Brazil.
- Honorable mention on best article at USP's International Symposium of Undergraduate Research - International Stage. Less than 600 mentions given from over 3200 applicants.
- Recipient of Academic Featured Student (2016), for students with a GPA above 9 / 10. Awarded to 7 / 120 students.

## TEACHING

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- **Data Science MBA T.A.** Feb 2020 -
  - **Processing:** Creating classes, practical exercises/evaluations and tutoring a class of 150 students.
  - **Classes mentored:** Intro to Python; Intro to ML; Advanced data acquisition and processing; ML; DL
- **General Computer Science and Data Science**
  - **NYU's Introduction to CS:** Python programming general grading, Fall 2021.
  - **Invited DS Course Lead:** Heading the DS part of a 3 month course at a startup incubator, Summer 2019.
  - **Python for DS course:** Teaching industry members at the Universidade de São Paulo, Fall 2019.

## INVITED EVENTS

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- **Khipu:** Latin American Meeting In Artificial Intelligence, invited participant through full merit-based scholarship
- **Data Day:** Head of the discussion panel "Present and Future of AI" with invited professors and industry members.
- **5th Mathematics Solutions Workshop for Industrial Problems:** One of the 3 invited undergraduate members. Analysing timber transport data for an ONG.
- **HTN 2018:** Full sponsorship to Hack The North 2018, Canada's biggest hackaton.

## VOLUNTERING

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- **Programming Tutor, 2017, 1 year:** Taught fundamentals of computer programming to underprivileged communities.
- **Tutor, 2018, 8 months:** Personal mentor to high school student, helping with SATs and career questions.