# Yuri Galindo

Yuri Galindo | yurigalindo | yurigalindo.github.io | yurioliveiragalindo@gmail.com

## Education

**Federal University of São Paulo**

- B.S in Computer Science 2018 - 2022
- B.S in Science and Technology 2018 - 2021
- *Featured Coursework:* Machine Learning, Artificial Intelligence, Complex Systems, Convex Optimization, Operations Research, Algorithm Design and Analysis, Parallel and Distributed Computing.

**Technological Institute of Aeronautics**

- Mechanical Engineering 2014 - 2017
- *Featured Coursework:* Linear Algebra, Probability and Statistics, Multivariable Calculus, Complex Analysis, Vector Calculus, Partial Differential Equations.

## Research Experience

**Fatima Fellowship** May 2022 - Present day

- Researching simplicity bias: the tendency of neural networks to learn only the simplest features.
- Showed that retraining the last layer can mitigate this simplicity bias only under some conditions.
- Showed that neural networks can actually learn more complex features, although with smaller weights.

**Graduation Thesis** Apr 2021 - Feb 2022

- Tested hypotheses for the lack of robustness of neural networks with the CLIP model.
- Showed that reliance on non-robust features may not be related to natural distribution shift robustness.
- Showed that use of high frequency information may be related to natural distribution shift robustness.
- Published the research at a **CVPR** workshop on robustness.

**São Paulo Research Foundation** Jan 2019 - Jul 2020

- Received a grant to develop a model for detecting meteors in camera images.
- Proposed training and testing on separate regions to account for distribution shift.
- Used confidence calibration to select 60% of the images and obtain 98% accuracy in this subset.
- Presented at the Latin American Meeting in Artificial Intelligence and published at ICONIP.

## Work Experience

**Itaú Unibanco** | Computer Vision Team - Data Scientist May 2022 - Present day

- Monitoring a model that computes similarity between faces from selfies and documents. Involves detecting distribution shift of model output and tracking percentage of matching faces by similarity level.
- Refactored a legacy model that detected frauds in checks for cloud deployment.
- Developed a model for assessing blur in selfies using classical computer vision algorithms.

**Itaú Unibanco** | Internal Solutions Team - Data Scientist Jul 2021 - May 2022

– Built and deployed an API for comparison of location profiles by analyzing transaction data.
– Built and deployed an API for comparison of services between banks by analyzing open finance data.
– Designed and implemented the integration of two internal packages for machine learning experiment tracking (similar to MLFlow).
– Obtained second place in a competition by forecasting clients purchases to recommend credit increase.

**Fhinck** | Backend and Analytics Team - Intern Jan 2017 - Mar 2017

– Developed back-end functionalities such as a timeline feature, and automatized processes.
– Realized an inference analysis on software acquired data, which successfully identified the strategies being adopted by a call center.

## Teaching Experience

| | |
|---|---|
| Multivariable Calculus Tutor at Federal University of São Paulo | 2021 |
| Volunteer High School Tutor at CASDVest | 2020 |
| Volunteer High School Tutor at CASDVest | 2015 |
| Volunteer Middle School Tutor at CASDinho | 2014 |
| Volunteer Astronomy Olimpiad Teacher at CASDinho | 2014 |

## Publications

**Yuri Galindo** and Fabio A. Faria (2022). "Understanding CLIP Robustness". In: *The Art of Robustness: Devil and Angel in Adversarial Machine Learning. Workshop at IEEE Conference on Computer Vision and Pattern Recognition 2022*.

**Yuri Galindo**, Marcelo De Cicco, et al. (2020). "Monitoring Night Skies with Deep Learning". In: *International Conference on Neural Information Processing*. Springer, pp. 460–468.

**Yuri Galindo** and Ana Carolina Lorena (2018). "Deep transfer learning for meteor detection". In: *Anais do XV Encontro Nacional de Inteligência Artificial e Computacional*. SBC, pp. 528–537.

## Skills

**Languages:** Python, C, SQL, LaTeX, PHP **Toolkits:** Git, PyTorch, scikit-learn, NumPy, Docker