



# Francisco Simoes

## Education

- 2017–2019 **Theoretical Physics Master's program**, *Utrecht University*, Netherlands, 7.6/10.  
Approximately half of my courses were in mathematics, and half were physics courses. My thesis was in some mathematical aspects of String theory.
- 2016–2017 **Year devoted to mathematics**, *University of Porto*, Portugal, 8/10.  
Unsatisfied with the lack of mathematics in my bachelor, I decided to spend one year attending specific mathematics courses which interested me and were relevant to physics. Some of those courses are: topology, differentiable manifolds, logic, group theory, functional analysis.
- 2013–2016 **Physics Bachelor's program**, *University of Porto*, Portugal, 8/10.

## Master thesis

- title *The Monoidal Category of D-Branes in a Kazama-Suzuki model*  
supervisors Stefan Vandoren, Ana Ros Camacho  
description I showed that one can construct a category of *D*-branes in the most prolific Kazama-Suzuki model, and that there is a notion of tensor product inside this category.

## Experience

- Feb 2019 – **Student Assistant**, *Utrecht University*, Utrecht, Netherlands.  
– May 2019 Calculus and Linear Algebra.  
(Part-time job).
- April 2020 – **Intern**, *UMC - Brain Center*, Utrecht, Netherlands.  
– Aug 2020 Exploring statistical and dimensionality reduction methods in genomic research related to Amyotrophic Lateral Sclerosis.
- Sep 2020 – **Data Scientist / ML engineer**, *Orbisk*, Utrecht, Netherlands.  
– Present Data analysis and computer vision projects. The company's product helps the reduction of food-waste.

## Languages

- English **Proficient**, IELTS score in 2017: 8 out of 9.  
I have been using English as my daily language since I moved to the Netherlands in 2017, both in my professional and personal lives.
- Portuguese **Native**.

## Computer languages/skills

- Python* Using for university work since 2013. Currently using Python for my work analyzing data and creating packages for my company's data and AI teams.
- Pytorch* I know my way around the main Pytorch classes, and how to tailor and run models for custom datasets.
- Bashscript* The basics: I learn bashscript in an as-need basis, when deploying scripts or improving my Linux machine's behaviour.
- SQL* I frequently need to use SQL and write short scripts to interact with Postgres databases of my company.
- R* Used R for my internship. I know the basics only, but Python skills are quite transferable to R.
- Machine learning:* I learned ML first by using textbooks and the online resources in Coursera (in the "Machine Learning", "Improving Neural Networks: Hyperparameter tuning, Regularization and Optimization", "Structuring Machine Learning Projects" and "Convolutional Neural Networks" courses). Since then, I've been reading papers and books mostly on geometrical ML, causal inference, theoretical underpinnings of AI and computer vision.

## Other

- Volunteering* Participated in a "Healthcare Data Science Hackaton", where I worked in a team on a project for Red Cross related to the Dengue disease.

## Interests

- Philosophy* I enjoy reading and discussing about philosophical topics. I hate Nietzsche though.
- Jazz dance* I am learning swing dance - more particularly Lindy Hop.
- Racquet sports* Tennis, Squash, Table Tennis
- Water sports* Skimboarding and Surfing when in my hometown.
- Stand-up-comedy* I like to watch stand-up-comedy, and I did a few gigs myself back in Portugal.