

# Bruno Gehlen F. da Silva

Universidade de São Paulo, R. do Matão, 1371 - Butantã, São Paulo - SP, 05508-090

☎ +55(71)99252-6281 | ✉ brunogfdsilva@gmail.com | 🏠 bruno-gehlen.github.io | 📄 github.com/Bruno-Gehlen



*"We are what we repeatedly do. Excellence, then, is not an act, but a habit." – Aristotle*

## Personal Profile

I'm an eternal learner and Bachelor's student at the Universidade de São Paulo with a strong interest in particle physics and exploring beyond the Standard Model of Particles. I'm passionate about the mathematics behind physics, specifically differential geometry and functional analysis!

## Education

### University of Sao Paulo

B.Sc in Physics

Sao Paulo-SP, Brazil

April 2021 - December 2024

### Sartre | Escola SEB

High School

Lauro de Freitas-BA, Brazil

Apr 2018 - Apr 2020

## Work Experience

### Scientific Initiation - Institute of Theoretical Physics IFT UNESP

São Paulo, Brazil

Mathematica Demonstrations in an introduction to Quantum Field Theory and Particle Physics

Jun 2024 - Dec 2024

- It is of paramount importance to expose undergraduate students to cutting-edge physics topics as soon as they have the capacity to grasp them. In this project, our aim is to enhance candidates' education by delving into introductory texts on Particle Physics and Field Theory. In addition to the usual approach of reading books and presentations, we will complement it with the creation of Mathematica programs that will perform relevant calculations for this study. These programs will not only facilitate simulations and demonstrations, offering candidates a deeper understanding of the subject, but will also be made available to other students or the general public.

## Extracurricular

### III Escola de Inverno Jayme Tiomno

São Paulo-SP, Brazil

Universidade de São Paulo

Aug 2021

- Introdução aos Fundamentos Filosóficos da Mecânica Quântica
- Introdução à Teoria de Supercordas
- Métodos Algébricos da Física Teórica

### Curso de Verão do IF-USP

São Paulo-SP, Brazil

Universidade de São Paulo

Mar 2022

### IV Escola de Inverno Jayme Tiomno

São Paulo-SP, Brazil

Universidade de São Paulo

Aug 2022

- Física Além do Modelo Padrão
- Introdução aos Modelos Científicos a Partir da Filosofia da Ciência: Uma Abordagem Pela Física
- Sistemas Hamiltonianos em Espaços Vetoriais Simpléticos
- Uma Introdução À Teoria Quântica de Campos em Espaços-Tempos Curvos

### Curso de Verão do IF-USP

São Paulo-SP, Brazil

Universidade de São Paulo

Feb 2023

## Skills

### Programming

Python (specifically science/data packages, as Pandas, NumPy, SciPy, Matplotlib), Fronted in general (the triad HTML/CSS/JavaScript), Wolfram Mathematica

### Miscellaneous

Linux,  $\LaTeX$ , Microsoft Office, A personal Homelab where I take time to test new technologies

### Soft Skills

Problem-solving, Efficiency Enthusiast, Documentation, Organized, Optimizer.

## Achievements

---

2019	<b>Bronze Medal</b> , Mathematical Kangaroo	<i>Brazil</i>
2020	<b>Gold Medal</b> , National Science Olympiad (ONC)	<i>Brazil</i>
2020	<b>Bronze Medal</b> , Brazilian Olympics of Astronomy (OBA)	<i>Brazil</i>

## Interests

---

<b>Physics</b>	I have always been passionate about it, especially the mathematical formalism. I am currently applying for a master's degree in pure mathematics at Institute of Mathematics and Statistics of USP.
<b>Linux</b>	Since 2021, I have been exploring the world of Linux and the open source. Currently using Arch.
<b>Music</b>	I enjoy almost all types of music, as long as it's Brazilian. I particularly listen to rap, R&B and jazz.
<b>Art</b>	I have always enjoyed drawing since I was a child. Sometimes I sketch something to distract myself.

## Languages

---

<b>Portuguese</b>	Native proficiency
<b>English</b>	Bilingual proficiency
<b>French</b>	Beginner proficiency