

VITTOR BRAIDE COSTA

Curriculum Vitae



CONTACT

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Vittor Braide
Personal Website

PERSONAL INFO

Current Address:
Avenariusstraße
81243 München
Nationality: Brazilian
Year of Birth: 2002

LANGUAGES

Portuguese:
Native Language.
English:
Fluent
German:
onSET B1 Certificate
Studying B2.2

TECHNICAL SKILLS

Programming

Python, Matlab, R,
Simulink, C, HTML, \LaTeX ,
Wolfram Mathematica

Softwares

ANSYS, SolidWorks, Auto-
CAD, Siemens NX10, Fu-
sion 360

EDUCATION

Technische Universität München (TUM)

10/2023 - Present München, DE

- Enrolled in a Mechanical Engineering Master
- Double Degree Program with AUCANI merit scholarship
- Semester Thesis: Evaluation of Quadratic Programming Solvers for Control Allocation - in progress
- Grade in 17/11/2024: 2,0 - German Grading System

Polytechnic School of the University of São Paulo (POLI - USP)

03/2020 - Present São Paulo, BR

- Enrolled in a Mechanical Engineering course.
- Rating and Grade in 25/10/2023: 7° of 86 and 8,6/10.

Federal Center for Technological Education of Minas Gerais (CEFET-MG)

01/2017 - 12/2019 Belo Horizonte, BR

- Completed a technical high school degree with an integrated course in mechanics.

EXPERIENCE

Flight Control Laws Internship, Lilium

02/2024 - 07/2024 München, DE

Lilium is an innovative company developing the first electric vertical take-off and landing (EVTOL) jet. Pushing engineering boundaries, the Lilium Jet has 16 flaps and 30 actuators to pursue hover and forward flight missions.

Brief description of the pursued activities:

- Matlab tool to run Simulink models simulations.
 - Implementation of new features (e.g baseline comparison).
 - Robustness improvement to address different simulink models.
- Support in the development of flight envelopes using trim data.
- Nonlinear simulations automatic criteria evaluation.
 - Lateral-directional and longitudinal-vertical control responses
 - Loads and rates thresholds violations.
 - Flap command and flap deflection conformity.
- Jenkins Implementation to track Simulink Flight Control Systems (FCS) model changes.
 - Pipeline to automatically compile FCS after changes.
 - Pipeline to run predefined tests and update baseline.
 - Pipeline to periodically run a batch of tests and track progress with criteria evaluation.
- Simulink models compliance with software standards verification
- Change in the linear design pipeline when tuning gains
 - Implement the use of tunable Matlab features to build closed-loop linear models 5x times faster
 - Implement new features to the pipeline in order to allow some user flexibility when choosing the closed-loop components.

Teacher Assistant for the module *Thermodynamics I*, POLI-USP

03/2023 - 07/2023 São Paulo, BR

- Provided academic support in thermodynamics laws and cycles.
- Advisor: Prof. Dr. Guenther Carlos Krieger Filho.

Teacher Assistant for the module *Mechanics I*, POLI-USP

08/2022 - 12/2022 São Paulo, BR

- Provided academic support in body kinematics and dynamics.
- Advisor: Prof. Dr. Flavius Portella Ribas Martins.

Teacher Assistant for the module *Graphic Representation for Project*, POLI-USP

📅 04/2021 - 07/2021

📍 São Paulo, BR

- Provided support in the use of CAD softwares.
- *Advisor*: Prof. Dr. João Roberto Diego Petreche.

Internship, *Blossom Consult*

📅 12/2019 - 02/2020

📍 Belo Horizonte, MG

Internship at an engineering company, gaining hands-on technical experience in the field of industrial pipeline projects.

👤 RESEARCH GROUPS

PoliSat - *Cofounder and ADCS Leader*

📅 01/2021 - 06/2022

📍 São Paulo, BR

First nanosatellite engineering team in USP. It currently has over 20 members and has already participated in three competitions.

- *Activities*: Took part in the foundation, leader of the Attitude Determination and Control Subsystem (ADCS) and advisor for the Structural part.
- *Note*: 1st place in the Brazilian National Satellites Olympics.

PET Mecânica - *President, Head of Marketing and Scholarship Member.*

📅 10/2020 - 04/2023

📍 São Paulo, BR

Group financed by the Brazilian Ministry of Education that focuses on the development of social and engineering projects

- Scholarship Member since joining.
- Responsible for the management of the group, including the supervision of 5 active projects, 18 members and almost \$6,000 in funding.
- Head of Marketing of the group (Jan 2021 - Feb 2022).
- *Advisor*: Prof. Dr. Edilson Hiroshi Tamai.

VOLUNTEERING

👤 Adote um aluno

Initiative to assist high school students who faced educational challenges during the COVID-19 pandemic with topics in mathematics and physics