

# Rodrigo Bento Costa

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## Education

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- **Sao Paulo State University (Unesp)** **Bauru, Brazil**  
*B.Sc. Electrical Engineering* **2016–2021**  
"Control of a Quadrotor UAV by Exact Linearization Approach"  
Supervised by Prof. Paulo Sergio da Silva and Eng. M.Sc. Otavio Jose Dezem Bertozzi Junior.
- **Aeronautics Institute of Technology (ITA)** **São José dos Campos, Brazil**  
*MsC Electrical Engineering* **2022-2023**  
"Using predictive control techniques to simulate a satellite plant dynamics with the use of a hovercraft model"  
Supervised By Prof. Roberto Kawakami Harrop Galvão **Interrupted due to personal heathy issues**

## Professional Experience

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- **GRM-Consultancy** **São Paulo, Brazil**  
*Internship at GRM-Consultancy* **October 2021–March 2022**  
Inspection reports on electrical infrastructure safety and maintenance for buildings and houses.

## Academic Experience

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- **Sao Paulo State University (Unesp)** **Bauru, Brazil**  
*Teaching Assistant* **March–December 2018**  
Signal Processing, Signals and Systems, Linear Control Systems I  
Instructor: Prof. Paulo Sergio da Silva

## Skills

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- **Programming and Software:** MatLab, Octave, SciLab, Simulink, Xcos and NI LabView for Control System Modeling, Proteus and NI Elvis for eletronics prototyping, simulation and instrumentation, Microwind for microeletronics CI layout design and test,  $\text{\LaTeX}$ , MS Office, Solid Edge, FreeCAD, KiCAD, CAdESIMU, Cura, C/C++, python and the package manager pip, enviroment virtualization with Python (venv), Java, Android Studio IDE, XML, LibGDX Java framework for game development.  
Javascript and Typescript Basic Frameworks and APIs, HTML5, CSS3, use of frameworks and modules like webpack and gulp for minifying scripts and workspaces, makemigration from development to production enviroment (uglify operations) and for transpiring TS to JS and SASS/SCSS to common CSS, usage of Babel JS compiler for manual transpiring and within Gulp for automatization tasks, FireBase DataBase hosting for Android, basic data structures and backend architecture notion, OOP and functional paradigms, imperative and declarative paradigms. Postman API for web apps, Regex using Python, JQuery, Gulp, Webpack, Angular9, VueJS, React Core and React DOM web design frameworks and APIs. Ajax and express JS modules for programming HTTP, and HTTPS web protocol procedures as well as JSON server in npm package administrator for Node-JS. AWS and Netlify tools for websites deploys. Structured Query Language (SQL) in the subdomains DDL, DQL, with MySQL Server, Docker for Windows and MySQL Workbench and DBeaver as SQL script and connection editors, usage of the CRUD concept for the design of Relational DB servers and non-relational/noSQL DB Servers (MongoDB), Windows Power Shell, WSL2, basic CLI commands for Windows Shell and Linux Terminal  
Python and R modules and frameworks for AI and ML model implementations: SciPy, NumPy, Pandas, SciKitLearn, PyTorch, TensorFlow (numerical computing and creating models) and Matplotlib and SeaBorn (for data visualization) keras, randomForest and e107 for R, Rstudio, JupyterLab, Jupyter Notebook and Anaconda Navigator GUI enviroment for Data Science Studies and tests. Use of ACCENT and Ink-Ration concepts to vreate responsive, dynamic and user friendly graphics and dashboards.

- **Other Skills:** PCB layout design and soldering, embedded systems design (Arduino and STM32) using arduino and STM32 IDEs in C++ and C, IC components design, communication, reporting, and presentation skills, electronic prototyping, 3D Printing, Ubuntu Linux Distributions, dualbooting and data partition process for HD and SSD Memory Units.
- **Languages:** Portuguese (Native), English (Fluent), Spanish (Intermediate), German (Basic).

## Courses and Certifications

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### ○ UDEMY:

- DATA SCIENTIST TRAINING: THE COMPLETE COURSE 2023 Online  
January 2024
- COMPLETE MODERN WEB COURSE WITH JAVASCRIPT 2022 + PROJECTS Online  
June 2024
- INTRO ROBOTICS DEVELOPER COURSE - USING ROS IN PYTHON Online  
July 2023
- PYTHON PROGRAMMING LANGUAGE Online  
May 2024
- ANDROID APP DEVELOPMENT WITH 7 REAL ANDROID APPS AND JAVA Online  
July 2023
- MICROCONTROLLER EMBEDDED C PROGRAMMING: ABSOLUTE BEGINNERS Online  
February 2023
- MASTERING MICROCONTROLLER AND EMBEDDED DRIVER DEVELOPMENT Online  
February 2023
- CRASH COURSE ELECTRONICS AND PCB DESIGN Online  
January 2023

### ○ MIMO:

- CERTIFICATE OF ACHIEVEMENT - CSS Online  
May 2023
- CERTIFICATE OF ACHIEVEMENT - Web Development Online  
May 2023
- CERTIFICATE OF ACHIEVEMENT - HTML Online  
May 2023
- CERTIFICATE OF ACHIEVEMENT - Python Online  
May 2023

### ○ SENAI:

- "JOSÉ EPHIM MINDLIN" Online  
November 2022
- TRANSVERSAL COMPETENCE - PERSONAL FINANCES
- "JOSÉ EPHIM MINDLIN" Online  
June 2022
- TRANSVERSAL COMPETENCE - METROLOGY
- "RICARDO LERNER" Online  
June 2022
- TRANSVERSAL COMPETENCY - PROGRAMMING LOGICS
- "JOSÉ EPHIM MINDLIN" Online  
June 2022
- ELECTRICAL AND HYBRID VEHICLES

### ○ FIT-Institute:

- STARTER TRACK - ARTIFICIAL INTELLIGENCE Online  
July 2022

## References:

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- Prof. PhD Paulo Sérgio Da Silva, Professor at UNESP, Bauru
- Otávio Dezzem Bertozzi Jr, PhD Student at KAUST, Saudi Arabia  
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