

# João Victor Torres Borges

Robotics Engineer,  
Computer Engineer

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## Languages

- Portuguese
- English

## Skills

- C++  
Libs: Boost, Eigen, OSQP
- Python
- ROS/ROS2
- Gazebo
- Git
- OpenCV
- Linux
- Docker
- Yocto
- Robotics
- Computer Vision
- Control Systems
- Embedded Systems
- Machine Learning

## Open Source Contributions

ros2\_control

ros2\_control\_demos

I'm a Computer Engineer graduated from the Federal University of Alagoas, Brazil. I have acted as Robotics Engineer, for 2 years, professionally, and have 5 years of academic experience, working with control, navigation, simulation, SLAM and multi-robot coordination. I also have worked with computer vision and embedded systems, developing prototypes of mobile robots and autonomous systems applications. My strong skills are C++ and ROS for development. Currently, I work at the Brazilian Robotics Institute, in SENAI CIMATEC, on projects related mainly to the Oil and Gas industry.

## Working Experience

### Fulltime

- 2019 – currently **Robotics Engineer** SENAI CIMATEC  
**RBIM** is a project of a robot to attend tasks of inspection and intervention in the field of Oil and Gas. Activities developed were the robot dynamic model in an underwater environment, controller design, teleoperation and control of devices. An interface for debugging and data visualization was also implemented.  
**TRIS** project - *Thermal Remote Identification System of Feverish People* raises up, during COVID-19 pandemic, as a virus propagation control tool by assisting in the process of detecting feverish people. The essential modules are face detection and recognition, as well as, temperature estimation. Activities developed were the software architecture design, data acquisition and integration of modules into an optimized pipeline for real time application.
- 2019 – 2019 **Robotics Engineer** Brisa Robotics  
Activities developed were software development and integration, mainly stacks like mapping and localization, navigation and WEB dashboard, to launch a differential robot capable of navigate autonomously. Demo work: <https://www.linkedin.com/feed/update/urn:li:activity:6554061159870316544/>

### Internships

- 2017 – 2017 **Software Engineer** City Hall IT Department  
Activities developed were software development and maintainance for the city hall WEB systems implemented in JAVA. Some of those tasks included database (PostgreSQL) queries, frontend-controller functionalities and bug fixes.

## Education

### Study

- 2011 – 2017 **Bachelor in Computer Engineer** Federal University of Alagoas - UFAL  
Thesis: A Case Study for Analysis and Evaluation ORB-SLAM Algorithm.  
Demo work: <https://www.youtube.com/watch?v=7BjP0osEKhU&t=51s>.

## Publications

- 2020 **TRIS: Thermal Remote Identification System of Feverish People**  
International Symposium on Innovation and Technology - SIINTEC
- 2018 **PID Controller Synthesis for Network Controlled Second Order Systems**  
Brazilian Conference on Automation - CBA

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Torres Borges

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