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Paulo Rezeck

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EDUCATION

DOCTOR OF PHILOSOPHY (PHD) IN COMPUTER SCIENCE	06/2019 — 10/2022*
Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷
MASTER OF SCIENCE (MSc) IN COMPUTER SCIENCE	08/2016 — 02/2019
Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷
BACHELOR OF SCIENCE (BSc) IN COMPUTER SCIENCE	08/2010 — 07/2016
Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷
INTERNSHIP IN COMPUTER SCIENCE	02/2014 — 09/2015
Eberhard Karls University of Tübingen	Germany 🇩🇪

PROFESSIONAL & ACADEMIC EXPERIENCE

TECH LEADER / DIGITAL INSPECTION OF INDUSTRIAL PAINTING ACTIVITIES USING COMPUTER VISION	08/2020 — 07/2022
Petrobras / Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷

Description: *Recognition of human actions for industrial painting activity using deep learning approaches.*

- **Technical leader** of graduate students and **design of microservice architecture** using containerization (Docker);
- Experience with **neural networks** (CNN/GCN) and **algorithm optimization** (C++/Python/Ceres/Eigen/CUDA);

ROBOTICS ENGINEER / ARTIFICIAL INTELLIGENCE ROBOTIC RACING	02/2019 — 04/2020
XQuad Team	Brazil 🇧🇷 / USA 🇺🇸

Description: *Worked with a team specialized in UAV to create an AI for racing drones that can beat a human pilot.*

Awarded 7th/424 place at the Artificial Intelligence Robotic Racing (AIRR) competition.

- Experience in **Linux embedded system and algorithm optimization** (C++/Ceres/Eigen/CUDA/CMake);
- Experience with **visual odometry** (ORB_SLAM2/ROVIO/VINS) and **object detection** algorithms (YOLO/OpenCV);

STUDENT RESEARCHER / ADVANCED TELEOPERATION OF EXCAVATORS IN THE MINING INDUSTRY	10/2017 — 08/2020
Vale Institute of Technology (ITV) / Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷

Description: *Develop a framework for excavator teleoperation using haptic technologies and visual immersion.*

- Robotic manipulator **haptic control** (C++/ROS/MOVEit);
- Development of a **master/slave systems** for teleoperation (Unity/WebRTC/ROS);

STUDENT RESEARCHER/ COOPERATIVE MAGNETIC-MAPPING USING SMALL UAVS	09/2015 — 08/2017
Vale Institute of Technology (ITV) / Universidade Federal de Minas Gerais (UFMG)	Brazil 🇧🇷

Description: *Control of multiple drones creating a magnetic mapping for planning the ore deposits exploration.*

- Built **visual interface for real-time control of drones** (Python/JavaScript/QT);
- Developed applications for custom data acquisition and **signal processing** (Android Studio/Java/C++);

LANGUAGES & OTHER PROFESSIONAL QUALIFICATIONS

Programming Languages & Frameworks	Python, C, C++, Java, MATLAB, ROS, OpenCV, Unity, Docker, Git, Linux. Experience with good programming practices, clean code, debugging, and testing;
Teaching Assistant	Mobile Robotics (2018) & Introduction to Artificial Intelligence (2021) both at UFMG.
Scientific Production	8 journals, 12 conferences, 4 workshop/abstracts.
Languages	Portuguese (native), English (proficient), German (limited working proficiency).