

Santiago Restrepo

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WORK EXPERIENCE

Universidad Autonoma de Occidente

Researcher Junior

Cali, Colombia

Feb 2023 - Present

- Participating in an engineering R&D project focused on a tableware production machine using coffee residues for social environments like coffee shops using conceptual design methodologies.
- Utilizing Solidworks to design and fabricate the machine for the project.
- Collaborating with a team of engineers and designers to ensure project success.
- Coordinating with vendors and suppliers to procure necessary materials for the project

Kiwibot

Maintenance Engineer Junior

Medellin, Colombia

Aug 2022 - Dec 2022

- Guaranteed the robotic fleet's safety and well-being using preventive and corrective maintenance procedures.
- Supported daily field operations in the USA.
- Repaired previous robots and increased fleet size by 250% with 15 operative robots for daily operations by utilizing oscilloscopes, multimeters, actuators, SMD soldering, and Altium 365.
- Learned to work in fast-paced start-ups with remote support and surveillance.

Universidad Autonoma de Occidente

Research student at RAS research incubator

Cali, Colombia

Jul 2019 - Jul 2022

- Led the Crazyswarm project involving software and hardware development with nine autonomous MAVs.
- Developed software and hardware using open-source tools such as ROS middleware, Python, C++, and Linux systems.
- Guided new people into the project and exhibited the research incubator and its projects using flight demos.
- Completed thesis project, CrazyKhoreia, and 3DBot.

PROJECT EXPERIENCE

Universidad Autonoma de Occidente

CrazyKhoreia. A robotic perception system for UAV

Cali, Colombia

Jan 2022 - Jul 2022

- Developed an open-source robotic perception system for UAVs' path planning from a digital image.
- Fully coded in Python and tested using the Crazyswarm project and the Crazyflies UAVs.
- Utilized open-source tools such as Sci-kit learn, Python, Google Colab, Git, Numpy, PyPi, OpenCV, Scipy, matplotlib, ROS, LaTeX, Overleaf, and Linux.

Universidad Autonoma de Occidente

3DBot. A large format robotic mobile 3D printer.

Cali, Colombia

Jul 2021 - Jul 2022

- Developed an open-source robotic mobile 3D printer using design methodologies, additive manufacturing, and robotics systems.
- Utilized open-source software and hardware tools such as Git for source control; Python for high-level computing using a Raspberry Pi 3 running Linux and ROS; and C++ to build microcontroller firmware.
- Implemented IoT features such as live streaming using an Azure VM with an Nginx server, a web page built on PHP, and data streaming with MySQL.

EDUCATION

Universidad Autonoma de Occidente

Mechatronics Engineering Bachelor's Degree

Cali, Colombia

Stanford Online

Machine Learning Course Certificate

Remote

Zero To Mastery

TensorFlow Developer Certificate

Remote

SKILLS & INTERESTS

Skills: Python, Linux, ROS, C++, Scikit-Learn, TensorFlow, OpenCV, MATLAB, Git, PLC, GRASFET, SOLIDWORKS, Robotics Maintenance.

Interests: : Robotic perception, computer vision, IoT, Artificial Intelligence, embedded systems.