




Company Description

Successful candidates will play a critical role in the development of software for unmanned aircraft and robotic systems within our Tecnia Electric Aircraft departments. This position demands exceptional creativity to develop innovative solutions for high performance devices. It requires both a sound understanding of fundamental engineering, principles of software engineering, and the ability to develop software on various hardware platforms/architectures. You will work on a variety of software projects that span multiple software architectures and hardware platforms that are interconnected, including ARM Cortex M0, TI MCU, FPGA, DSP and embedded Linux. It requires the hands-on abilities to implement and test new algorithms and software on both physical hardware and in simulated environments.

Information

 Deadline: 2020-03-31
 Category: Business
 Province: Gipuzkoa

 Country: Basque Country
 City: Donostia - San Sebastián

Company

Tecnia Research and Innovation



Main functions, requisites & benefits

Main functions

Work on projects in C++ and Python in a Linux-based environment, use Python to analyze data, find problems, and improve algorithms. Test code in simulated environments – software and hardware in the loop (SIL, HIL). Develop prototypes to explore new ideas and work in iterative development cycles. Implement new and existing algorithms to improve control, estimation, and computer vision techniques in drone related applications. Keep up-to-date on technologies and methods for autonomy, estimation, control, and computer vision. Work with sensors commonly used on drones: IMU, GPS, EO/IR cameras, and radar. Keep up-to-date on the state-of-the-art of drone technologies and methods for autonomy, estimation, control, and computer vision. Solve new software problems in a variety of projects.

Requisites

Expertise in C++ and Python programming on Linux systems. Experience with Matlab/Simulink. Experience with flight control systems and specific autopilots, PX4 flight stack, Dronecode SDK, MAVlink, low level communication (UART, SPI, CAN, I2C). Desired experience with DSP/FPGA embedded systems. Desired experience with Robot Operating System (ROS) is preferred. Desired experience with real-time embedded systems, system identification, state estimation and control of UAVs, as well as high-speed communication protocols. Desired experience in flight testing UAV software and electronics.

