



3D AEROSPACE

3D/2020/INT/002 Internship Opportunity

Development of 2D/3D Vision, Modelling & Validating



Company

3D Aerospace (www.3daerospace.eu) is an European young start-up established in June 2018. 3D Aerospace is located at Albi (France) in the incubator of the Ecole des Mines. 3D Aerospace has received several funding (local, national and European) in order to manufacture and test its first prototypes by Summer 2020. The company is developing an innovative new generation of GNSS (GPS / Galileo) receiver targeting Industry V4.0 applications.

The company is based on equality gender, positive working atmosphere, hard work transparent communication and continuous improvement. 3D Aerospace proposes a safe environment to make innovation happens. As a high technology company, failure is perceived as an opportunity to learn and improve and is accepted as long as a rigorous and structured work is applied.



Internship

During the period of the internship, the intern will have the opportunity and responsibility to work on three main topics:

1. Review the current the vision subsystem of the receiver..

3D Aerospace platform is made of an accurate GPS receiver (submetric accuracy) and an array of cameras working in visible and infrared wavelengths. The cameras are spread out on the receiver in order to maximise the receiver's field of view. During this first part of the internship, the intern will have to:

- Review and consolidate the vision subsystem requirements based on the system requirements.



3D AEROSPACE

- Develop the calibration algorithm / strategy for the array of cameras.
- Simulate the field of view of the array of cameras based on the position of the cameras on the receiver.

2. Development of 2D & 3D modelling and implementation into the prototype

The purposes of this receiver is to digitally map in 2D and 3D existing infrastructure such as trees and cities. Hence during this second phase of the internship, the intern will have the following objectives:

- 2D / 3D modelling strategy for living plants (model, algorithm and implementation)
- 2D / 3D modelling strategy for fixed infrastructure in city (model, algorithm and implementation)

3. Implementation in the receiver and support test campaigns.

Finally, the intern will have the opportunity to work in close collaboration with the engineering team to implement he developed algorithms in the receiver FPGA (or the company cloud) and to be part of the test campaigns in the field.



Additional Information

Location: 20 Chemin de la Teuliere, Albi, 81000 France

Internship Duration : 6 months starting from February / March to End of August 2020.

Working Language: English

Internship allowance: 575.50€ per calendar month

Contact email address: contact@3daerospace.eu

Working conditions: 3D Aerospace is a small team of passionate and hard worker people. Our small size is actually one of our man strengths as it provides agility, flexibility and a sense of family-size company. Our organisation is based on daily scrums and monthly milestones review.

Application process: One case study to prepare offline and an one to one interview with 3D Aerospace core team.



3D AEROSPACE