3D AEROSPACE

INTERSHIP OPPORTUNITY

Mechanical & Manufacturing

COMPANY

3D Aerospace (www.3daerospace.eu) is an European young start-up established in June 2018. We are located at Toulouse (France) in Montaudran and are developing an innovative new generation of GNSS (GPS / Galileo) mapping receiver.

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

3D Aerospace is currently developing two brands, DeVines and GaliGo. DeVines is part of the precision viticulture market, which brings together all the technological innovations related to viticulture. With DeVines, we offer an all-in-one solution, which combines several services in a single tool. GaliGo, our second brand under development, is part of the connected cities market. GaliGo offers a real-time updated traffic mapping solution and delivery network optimization.

YOUR ROLE

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

1. Review of the existing mechanical design

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 the mechanical subsystem requirements based on the system requirements.
- Develop a manufacturing strategy plan which will be implemented during the frame of the internship.
- Simulate the field of view of the array of cameras based on the position of the cameras on the receiver.

2. Consolidation of the mechanical design for the prototype units

A first mechanical design of the receiver has been already developed in 2020 but it requires to be consolidated. Using SolidWorks software, during the second part of this internship, you will have to:

- Develop the fixation strategy (screws, clips, glue) and system for the receiver.
- Manage the manufacturing process for the prototypes. This task will include to make the mechanical drawings of the parts to the supervision of the manufacturer contractor (tolerances management).
- Consolidate the assembly procedure of the system.
- Validate the assembly procedure through the assembly of the prototype.
- Develop the required Mechanical Ground Support Equipment (3D printed).
- Perform the mechanical tests (traction and shear) to validate the mechanical design.

3. Industrialisation of the mechanical parts for small batch series

Finally, you will also be involved in the industrialisation of the mechanical parts towards the end of the internship. Following the lessons learnt from the prototype units, the first task in this work package will be to enhance the mechanical design of the receiver product. The industrialisation of the mechanical parts will consist of performing a feasibility study on the best manufacturing process considering time, cost, quality, quantity, to manufacturer the mechanical parts for small batch series (batch of 100 units).

ADDITIONAL INFORMATION

Location: 3 Avenue Didier Daurat, 31400 Toulouse, France

Internship Duration : 6 months starting from February / March to End of August / September 2022.

Working Language: English

Internship allowance: about 575.50€ per calendar month (3.90€ per hour)

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 main 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.

Follow-on possibility: Following the completion of the internship and based on satisfactory results during the internship you could be offered job opportunity at the company.