

2026 internship proposal: FF72 desktop simulator for Handling Qualities

Duration: 6 months

Location: 35 Rue Gabriel Clerc, Blagnac

1. Context & Company Overview

Positive Aviation is a Toulouse-based aerospace company founded by former Airbus executives. Our flagship program, the FF72, aims to transform the ATR72 regional turboprop into a next-generation amphibious water bomber to combat global wildfires. By converting existing airframes, we offer a robust, cost-effective alternative to the aging Canadair fleet. Our engineering challenges are unique, combining high-performance aeronautics with complex hydrodynamics, specifically regarding the water scooping and dropping systems. Our team is working on a desktop simulator that shall represent the FF72.

2. Project Objective

The main objective of this internship is to prepare the desktop simulator, install the physical elements and integrate/develop models.

3. Detailed Missions

The internship is divided in 3 missions, which can be performed in parallel:

- Desktop simulator development
 - Setup of simulator desk and simulator environment, including the integration of pilot flight controls with force feedback;
 - Integration of current desktop simulator (based on Jsbsim) into Flight Gear;
 - Improvement of Flight Gear visualisation (i.e. addition of auxiliary fins, flight controls, doors, landing gear...)
- System modelling
 - Yaw damper model
 - Clinometry / anemometry models
 - Ground model (landing gear, braking, antiskid, free to castor, ground forces...)
 - Water model (static and dynamic)
 - Integration of other internship work into additional system models
- Validation of desktop simulator
 - Construction of a framework for testing and validating versions and evolutions of the desktop simulator
 - Preparation of validation tests

4. Candidate Profile

Skills needed for this internship:

- Self-motivated and proactive
- Creative and inventive mindset
- Strong ability to contribute with ideas and make proposals