# Thrust Balance System

# Progress Report

Prepared by:

**Kasra Azizi**

Supervisor:

**Dr. Ahmad Fakharian**

September 20, 2021

## Abstract

**Thrust Balance** testbed is one degree of freedom(1-DOF) representation of a real quadrotor(12-DOF) system built for educational and academic purposes. This system can be used in various research fields related to quadrotors and we can test and develop control algorithms on real pseudo-quadrotor dynamic system in safe manners.

The main duty of this system is to provide a cheap and safe testbed for testing various types of fault effects that can’t be injected into a real flying quadrotor due to the uncontrollable nature of this machine. So, we can test fault tolerant control algorithms in this system and then develop them onto a real quadrotor system.