

Muhammad Fazlur Rahman

Resume

Educations

- 2018–present **Master of Science in Aerospace Engineering**, *Majoring Aircraft System and Control*, ISAE Supaero, –Toulouse, France.
Courses: Control of Dynamic System and Implementation, Robust and Optimal Control, Object-Oriented Software Development, Flight Dynamics
- 2013–2017 **Bachelor of Science in Aerospace Engineering**, *Majored Aircraft System and Control*, Bandung Institute of Technology, –Bandung, Indonesia.
Courses: Control Theory, Automatic Flight Control, Flight Simulation, Instrumentation and Measurement, Avionics, Aircraft System

Experiences

- June - **Robotics Intern**, *ProtoSpace Toulouse - Airbus*, Toulouse.
September 2019 ProtoSpace is a FabLab model environment, enabling Airbus employees to fabricate their ideas. I made a telepresence robot (including its GUI), working with Pixhawk, ROS, and Lidar. Secondly, initialized an Automatic Pick and Place crowd-sourcing challenges in freelancer.com on behalf of Airbus
- Dec 2017 - **Avionics Officer**, *Terra Drone Indonesia (formerly Aero Geosurvey Indonesia)*,
March 2018 Bandung.
Terra Drone Indonesia is a company specialized in aerial survey using Unmanned Aerial Vehicle. I was responsible for UAV avionics research and development to be used in mapping and aerial inspection as well as making UAV avionics user manual and maintenance guidelines.
- Jan - Feb 2017 **Flight Dynamics Intern**, *Indonesian Aerospace*, Bandung.
Developed a simulation for flap deflection's effect to longitudinal stability of Indonesian Aerospace prototype aircraft N219. Familiar with the industrial environment and capable to conduct a simulation of aircraft motion.
- 2015–2016 **Chief**, *AKSANTARA ITB*, Bandung.
Managed group with various kind of UAV (multi-rotor and fixed wing) to be contested in Kontes Robot Terbang Indonesia (National UAV Contest) 2016. The team won six achievements.

Undergraduate Thesis

- 2017 **Implementation of Ellipsoid Based Obstacle Avoidance Algorithm for Quadcopter Control and Guidance**, ITB.
The thesis deals with software and hardware implementation for obstacle avoidance in quadcopter. The system approach is to use existing flight controller for stabilization and micro-controller as the obstacle avoidance controller. The research is published in IOP Science: Journal of Physics as "Obstacle Avoidance for Quadcopter using Ultrasonic Sensor"

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Researches and Projects

- Feb 2019 - **Control Engineer**, *Aircraft Lateral Control with Thrust Differential*, Toulouse.
present Developing a scale model of 8 engines aircraft to perform thrust differential as lateral control. The project implements an adaptive control law. Several hardware are used including Odroid (with ROS), Pixhawk, and additional Inertial Reference System.
- Oct - Nov **Control Engineer**, *Automated Tracking from Quadcopter*, Bandung.
2017 Developed an automated tracking from quadcopter using commercial off-the-shelf components. The vision system used Pixy (CMUcam5) and connected to Pixhawk as flight controller via Arduino.
- Jul - Oct **System and Control Engineer**, *Object Tracker Sensor for Unmanned Aerial Vehicle*, Bandung.
2017 Developed an object tracking system to be used in UAV as the sensor as conceptual prove. The output of the tracking system is to control the UAV to align with the target. The project was in collaboration with 2 professionals.
- Feb - May **System Engineer**, *Glider Nasional GL-1*, Bandung.
2017 Participated as a system engineer for a half-scaled glider test flight. Designed the system architecture, organized the hardware, and included in the post-flight analysis. The research was presented at International Seminar on Aerospace Science and Technology (ISAST) 2017 held by LAPAN.

Awards

- 2018 MBDA Program of Excellence for Indonesia Awardee
- 2017 BSc graduate with honor (Cum Laude)
- 2017 Presenter at 5th International Seminar on Aerospace Science and Technology (ISAST), held by LAPAN

Skills

- Basic Java, ROS, Image Processing
- Intermediate C++, MATLAB and Simulink, Python, SolidWorks, Arduino

Languages

- Indonesian **Native**
- English **Fluent**
- French **Intermediate**
- German **Beginner**