Alim Satria Fi'i Wijaya Kusuma

Hardware Engineer · PCB Designer

Sleman Regency, Yogyakarta, Indonesia

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Personal Profile

An Universitas Gadjah Mada student who is enrolled in Instrumentation and Control Engineering Technology. Dedicated to Control System and Hardware Engineering. Make various projects on instrumentation and control system, love to code microcontrollers, make PCB designs, and wrote project documentation on LaTEX and GitHub.

Education

Universitas Gadjah Mada *Yogyakarta, Indonesia*

Undergraduate degree in Instrumentation and Control Engineering Technology *2021 - Current*

Universitas Gadjah Mada *Yogyakarta, Indonesia*

Associate degree in Instrumentation Technology *2017 - 2021*

Work Experience

PT. Integrasi Teknologi Unggas (BroilerX) *Yogyakarta, Indonesia*

Hardware Engineer *Jan 2021 - Mar 2022*

- Developed an IoT devices to monitor the environment of broiler house.
- Responsible for the PCB design process, creating prototypes, communicating and collaborating on IoT integration in the device, and ensuring the device operates effectively.
- **Technical Skills:** PCB Design using KiCAD, Firmware programming using C++, Internet of Things
- **Soft Skills:** Teamwork, Time Management, Communication.

University Projects

Implementation of Flight Controller Design and PID Control on Quadrotor Attitude *Yogyakarta, Indonesia*

Universitas Gadjah Mada - Undergraduate *Dec 2022 - Current*

- Make and iterate PCB design of quadrotor flight controller to find the most compact and stable design using 8-bit microcontroller
- Tuning and refining the quadrotor attitude control using PID to make a stable attitude control and add feature to the program to log the IMU sensor and GPS data
- **Technical skill :** PCB design using KiCAD, Programinng in Processing (Java), control system

Remake of Feedback ES151 *Yogyakarta, Indonesia*

Universitas Gadjah Mada - Undergraduate *Dec 2022*

- Revive and repair an old Feedback ES151 so that it can be used for learning and demonstrating PID to control velocity and position of a DC Motor
- Designing Human Machine Interface (HMI) using LabView so the machine could interact and be controlled by a computer
- Code the microcontroller using C++ and bridge the communication between the computer (HMI) and the machine
- **Technical skill :** Programming in C++, Building HMI with LabView

Design and Implementation of Light Ambient Control System on Broiler Farm Using PID Controller *Yogyakarta, Indonesia*

Universitas Gadjah Mada - Assosiate *2020*

- Creating a device to maintain constant light intensity inside broiler chicken cages. The device consists of a microcontroller connected to a light sensor and LED.
- Designing Human Machine Interface (HMI) using LabView so the machine could interact and be controlled by an web app over the internet
- **Technical skill :** PCB Design using EAGLE, Firmware programming using C++

Skills

Programming	Python, LabView, C/C++, Matlab.
Hardware Design	Kicad, Eagle
Soft Skills	Teamwork, Problem-solving, Documentation.

Interests

Linux	Since 2017, I have been in love with Linux. I use it for coding and doing hardware design. My distro of choice is KDE Neon because it is beautiful
Technical Writing	I write some projects on my GitHub about control systems and hardware design. One of my favorite projects is when I revive an old PID tuning machine for the control system lab. I build the HMI with LabView and code for the main controller with C++. kindly check out the documentation of the project here.
LaTEX	I love LaTEX for writing my lab report because it looks pretty, cool and neat. I go as far as make a lab report template. Kindly check out my template here.

Languages

English	Professional proficiency (TOEFL ITP Score : 567/677)
Indonesian	Native proficiency
Javanese	Native proficiency

References available upon request.