Alim Satria Fi'i Wijaya Kusuma

Sleman Regency, Yogyakarta, Indonesia

✉ alimsatria45@outlook.com | 🏠 justraven.github.io/gitprofile | github.com/justraven | in linkedin.com/in/alimsatria

Personal Profile

A dedicated Engineering Technology student with a specialization in Instrumentation and Control, poised to contribute expertise in hardware engineering and control systems. Proven experience in developing IoT devices and a keen interest in exploring innovative solutions.

Education

Universitas Gadjah Mada   *Yogyakarta, Indonesia*

Undergraduate degree in Instrumentation and Control Engineering Technology   *2021 - 2023*

GPA : 3.53

Universitas Gadjah Mada   *Yogyakarta, Indonesia*

Associate degree in Instrumentation Technology   *2017 - 2021*

GPA : 3.61

Work Experience

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

Hardware Engineer   *Jan 2021 - Mar 2022*

- Developed IoT devices for monitoring broiler house environments, showcasing proficiency in PCB design and firmware programming.
- 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:** Electronics Design, Firmware programming, Internet of Things, Instrumentation
- **Soft Skills:** Teamwork, Time Management, Communication.

Projects

IoT Beacon PCB Design for Green House Monitoring   *Karanganyar, Indonesia*

Universitas Sebelas Maret - Freelance   *Present*

- I am working on the development of a device that aims to monitor the environment of the greenhouse using various sensors to measure the environment. The device is capable of interacting with the internet via an edge-processing device.
- **Technical skill :** Electronic Design, Internet of Things

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

Universitas Gadjah Mada - Undergraduate   *Dec 2022 - Jul 2023*

- 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 :** Electronic Design, Programinng, Control System
- **Soft skills :** Time Management, Analytical Thinking

Remake of Feedback ES151   *Yogyakarta, Indonesia*

Universitas Gadjah Mada - Undergraduate   *Dec 2022*

- I have undertaken the project of reviving and repairing an old Feedback ES151 system to make it suitable for learning and demonstrating PID control for velocity and position of a DC motor. Additionally, I am designing a Human-Machine Interface (HMI) using LabView, which will enable the machine to interact with and be controlled through a computer interface.
- Code the microcontroller and bridge the communication between the computer (HMI) and the machine
- **Technical skill :** Programming, Human Machine Interface (HMI)

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

Universitas Gadjah Mada - Assosiate   *2020*

- I am working on the development of a device that aims to maintain a consistent level of light intensity within broiler chicken cages. This device utilizes a microcontroller connected to a light sensor and an LED. Additionally, I am designing a Human-Machine Interface (HMI) using LabVIEW. The device is capable of interacting with and being controlled through a web application that is accessible over the internet.
- **Technical skill :** Electronic Design, Firmware Programming, HMI Programming

Skills

Hard Skills	Electronics Design (KiCAD, EAGLE), Robotics, Human Machine Interface(HMI), Instrumentation, Sensors
Programming & Tools	C++, Python, MS Office, LabVIEW
Soft Skills	Teamwork, Problem-solving, Analytical Thinking.

Interests

Linux	Since 2017, I developed a deep affection for Linux, which I utilize extensively for coding and hardware design purposes. My preferred distribution is KDE Neon due to its visually appealing interface.
Technical Writing	I have documented several projects related to control systems and hardware design on my GitHub profile. One project that stands out as a personal favorite is the revival of an old PID tuning machine for the control system lab. For this project, I created the Human-Machine Interface (HMI) using LabView and wrote the main controller code in C++. I invite you to explore the project documentation by following this link.

Languages

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

References available upon request.