

# PETRUS CAELESTINUS PRATAMA PRIHANTORO

Sleman, Indonesia | +62 895339275534 | petrusprihantoro@gmail.com

## SUMMARY

---

Graduated with a degree in Electronics and Instrumentation, specializing in computer vision applications, and possess a strong passion for application development. I am eager to learn, implement, and develop technology-based solutions to address global challenges. I thrive on exploring innovative ideas and am constantly seeking new challenges to create a meaningful impact on society through technology.

## EDUCATION

---

UNIVERSITAS GADJAH MADA – Sleman, Indonesia

Aug 2019 – Nov 2023

Fakultas Matematika dan Ilmu Pengetahuan Alam, Departemen Ilmu Komputer dan Elektronika

Sarjana Sains, Elektronika dan Instrumentasi

GPA: 3.67/4.0

Undergraduate Thesis – Automatic License Plate Blurring Optimization by Utilizing YOLOv5 and Object Tracking

## PROJECT

---

### PROGRAMMABLE CDI

Apr 2023 – Aug 2023

Mobile App and Embedded System Developer.

- Developed a mobile application for **configuring the CDI timing** of motorcycles using the **ESP32** with Bluetooth Low Energy (BLE) protocol.
- Enabled **real-time monitoring** of speed, combustion chamber temperature, CDI battery status, and motor RPM through the mobile app.
- Designed and implemented an **efficient data flow** between the ESP32 and the mobile application.
- Introduced features such as **rumble idle timing** and **backfire adjustments** for enhanced performance.
- Technologies utilized: **Dart, Flutter, C, ESP32, BLE**.

### AUTOMATIC OBJECT ANONYMIZATION

Apr 2023 – Aug 2023

Full stack Android Developer

GitHub Link: <https://github.com/petrusceles/YOLOv5-Mobile-Automatic-Object-Blurring-App.git>

- Developed a video recording Android application that implements object detection and tracking to automatically blur detected license plates with up to **90% accuracy and a frame rate of 26 fps**.
- Utilized the **YOLOv5n6** model for object detection and employed **SORT (Simple Online and Realtime Tracking)** for predicting and estimating the next state of bounding boxes.
- Implemented asynchronous processing to **enhance the frame rate by up to 500%**.
- Technologies used: **Kotlin, Android Studio, Python, TensorFlow, Pytorch**.

### NAQOS: BOARDING HOUSE RENTAL

Jun 2023 – Oct 2023

Full stack Web Developer

GitHub Link: <https://github.com/petrusceles/Naqos-FE.git>

- Implement session with **cookies authentication, login and signin API, boarding house CRUD, seeker and owner role authorization, and booking API**.
- Using **Service Repository Pattern** as the design pattern.
- Technologies used: **ReactJs, ExpressJs, MongoDB, Vite, ReactQuery, PassportJs, TailwindCSS**.
- Deployed the API in **Cyclic** and the client-side app in **Vercel** and ensure automatic deployment.

### PAS ANDALAN SOLUSI : DRIVER MONITORING SYSTEM

Dec 2021 – Jun 2022

Computer Vision Application Developer

Documentation: <https://mipa.ugm.ac.id/2022/06/20/pas-andalan-solusi/>

- Develop drowsiness detection based on face behaviour such as eyes blink, yawning, and eyes opening area with up to **78% accuracy**.
- Integrating another driver monitoring system such as positioning system, driver alcohol detection, and vehicle velocity data acquisition into the android application.
- Technologies used : **Java, MLKit, Android Studio, CameraX API**.

## EXPERIENCE

---

### MINISTRY OF ENERGY AND MINERAL RESOURCES x UGM – Sleman, Indonesia

May 2024 – Dec 2024

Frontend Web Developer

- Developed a web application serving as a **bridge** between **mining business entities** and the **Ministry of Energy and Mineral Resources of Indonesia** to manage the complex flow of mining processes.
- Contributed to the **design** and **data structure** of various **components**, including **multi-select dropdowns**, **dynamic file uploads**, **comment features**, **real-time countdowns**, **dynamic form viewers**, and **route-based navigation**.
- Standardized the **front-end workflow** by collaborating with back-end developers to establish **API contracts**, considering **API response templates** for specific use cases or components, and defining methods for handling **data fetching states**.

### FULL DRONE SOLUTION – Sleman, Indonesia

Feb 2024 – May 2024

Mentor for Drone API Development, Mavlink, and C++ in Kampus Merdeka Programme

- Instructing students in becoming **Drone Application Software Developers**.
- Exploring the development of **Ground Control Stations** for both **desktop and mobile platforms**.
- Designing teaching materials focused on **C++ programming**, **API development connected to the Pixhawk Flight Controller**, and **Bridging Communication between Drone and Application**.

### PT PANDU AMAN SENTOSA – Sleman, Indonesia

Dec 2021 – Jun 2022

Computer Vision Application Developer

Developed computer vision android application to detect driver drowsiness called **PAS ANDALAN SOLUSI**

### GADJAH MADA ROBOTICS TEAM ALFAROBI – Sleman, Indonesia

Aug 2019 – Dec 2021

Computer Vision Programmer

- Developed pole detection algorithm for humanoid robot.
- Inspected the object projection algorithm to get reasonable value that represent the range between robot and detected object with  $\pm 30cm$  error.
- Using **Robot Operating System (ROS)** with **C++** for all program development.

## ACHIEVEMENTS

---

### INDONESIA ROBOT CONTEST REGIONAL 2021

[2<sup>nd</sup> Place on Humanoid Soccer Robot Contest](#)

### INDONESIA ROBOT CONTEST NATIONAL 2021

[Best Strategy on Humanoid Soccer Robot Contest](#)

## ADDITIONAL

---

**Technical** : HTML, CSS, JavaScript, ReactJS, VueJS, ExpressJS, Tailwind CSS, PostgreSQL, MongoDB, Machine Learning, Computer Vision, Python, Pytorch, Kotlin, Java, Android Studio, C++, C, ROS, Control System, Dart, Flutter

**Personal Skill** : Teamwork, analytical, concept oriented, fast learner, diligent, high curiosity, adaptive

**Github** : <https://github.com/petrusceles/>

**Linkedin** : <https://www.linkedin.com/in/celes-pratama/>