# CHRISTIAN JAKE MANGABAY

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**REGISTERED ELECTRICAL ENGINEER.** Specializing in the development of automated systems through the integration of programming, instrumentation, and engineering. Passionate, willing to learn, and always seeking improvements.

# **EDUCATION**

# University of the Philippines - Los Baños

Bachelor of Science in Electrical Engineering Major in Computer Engineering August 2019 - August 2024 DOST - SEI Scholar

# TRAININGS

### Data Analytics for the Future - X

UPLB Graduate School & DOST PCCAARRD Nov 2 - Dec 2023

• Completed a 5-day hands-on training on data analytics including data preparation, dashboarding, machine learning, and statistics

#### **Work Immersion**

Ogura Clutch Philippines Inc. Calamba City, Laguna Oct - Nov 2018

• Completed 40 hours of hands-on experience at a micro clutch manufacturing company on Quality Assurance Department, Warehouse Operations, Administrative Office: and Production Line:

## ORGANIZATION EXPERIENCE

#### **Chairperson for Skills & Training Committee**

UPLB Data Science Guild | 2023 - 2024

- · Led the planning and execution of technical training events, covering data science tools and programming
- Coordinated event logistics, including scheduling, speaker invitations, resource allocation
- Managed committee's documentations

## LANGUAGES

Fluent in English and Filipino, oral and written

#### SKILLS

#### **Programming**

- Python
- C++, C, C#
- VB
- JavaScript
- SQL
- AWS
- VHDL

# **Engineering**

- Arduino
- Raspberry Pi
- AutoCAD
- MATLAB
- MPLAB MS Excel Macros
- PLC

#### Soft skills

- logical thinking
- · creativity and innovation
- · problem solving
- attention to details
- communication
- research
- adaptability
- Interests Enthusiastic in automation, programming, engineering craftsmanship, and data analytics

#### **PROJECTS**

# **Development of PID Control for Autonomous** Horizontal Navigation of Non-GPS Drone with **Onboard Microcomputer**

Undergraduate Thesis | 2023 - 2024

- Developed computer vision-based autonomous navigation system of a non-GPS drone using Raspberry Pi Zero 2W
- Integrated communication and control system for drone, microcomputer, and smartphone

### Bluetooth Buzzers with Arduino and Python

Personal Project | 2025

- Programmed a Windows app with UI for advanced control such as notifier, timers and score management
- Built buzzers that can be connected to computers and phones
- Integrated with OBS Studio to enhance real-time hosting display

#### Mung Seed Counting System with Arduino

Project - Course | 2022

- Constructed a device to count mung seeds in real-time
- Built a robotic arm-like mechanical seed-drop mechanism with actuator support and blockage-detection sensors to ensure smooth and continuous seed flow.

Others include: drone simulation app, TV channel scanning device, and 50-digit Arduino calculator