Glenn Immanuel Raditya Datau

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Portofolio Web

About me

I am Glenn Immanuel Raditya Datau, an Internet of Things student at Petra Christian University. I am a person who enjoys challenges and likes to create various innovations, both in software and hardware. I have a strong interest in developing Artificial Intelligence and AR/VR.

Education

Internet of Things Petra Christian University (2022 - Present)

This major enables students to gain a deeper understanding of Artificial Intelligence and the Internet of Things. Through this program, I have learned about and understood the application of AI and IoT in various fields. The IoT major also trains me, as a student, to further develop and explore current technologies.

Experience

Autonomous Car (January 2023 - March 2023)

It was my first experience where I learned many things about Electronics, IoT, and AI. The autonomous car I built is equipped with computer vision, which includes a camera and an ultrasonic sensor to visualize the surrounding area and inform the main controller. From this experience, I have come to understand how to create a simple robot that can become intelligent when connected to sensors and interact with its environment.

Semifinalist at Technocorner UGM (February 2023 - May 2023)

In this experience, my two friends and I participated in an Internet of Things competition organized by Universitas Gadjah Mada (UGM). We developed an IoT-based application for tracking street vendors, making it easier for both the public and the vendors to find the location of their favorite street vendors.

Assistant at the Internet of Things and Telematics Lab (August 2023 - Present)

In this experience, I was entrusted with developing a Laravel-based website for a learning module. I was also tasked with designing a processor using FPGA (using verilog programming language). Additionally, I developed an IoT application to control several sensors in a room.

Programming of Internet of Things (January 2024 - June 2024)

During this course at my college, I completed a final project that combined Artificial Intelligence with the Internet of Things. I created an application called "Smart Hospital," which uses computer vision to detect individuals not wearing masks. This application is also connected to several sensors that enable doctors to monitor patients' conditions remotely.

Finalist of Noble Unesa Competition (May 2023 - June 2023)

In this opportunity, my teammate and I had the chance to participate in the Noble Unesa competition, where we were asked to create an innovative product. We developed an AI-based assistive device for the visually impaired called "Sense Sight." This device uses a camera as a sensor to detect the surrounding area and provide information to the visually impaired user. The goal of this device is to help visually impaired individuals be more productive and feel safer while performing their daily activities.

Excursion Study Committee at PT Sinar Baja Electric (Oktober 2023)

In October 2023, I was entrusted with honing my soft skills through the role of organizing a study excursion to PT Sinar Baja Electric. In this role, I served as the head or coordinator of the documentation and publication division. I ensured that all activities were properly documented and met the requirements set by the event organizer. Before the event began, I also worked on enhancing the event's branding by creating posters designed to attract Petra Christian University students to participate in the study excursion.

Petra Industrial Otomation Competition Committee with Schneider (November 2023)

In November 2023, Petra hosted a PLC competition specifically for electrical engineering students in Indonesia. This event was in collaboration with Schneider Electric, with Schneider's team serving as the judges. I was assigned to a new role on the committee as part of the material division. For three months leading up to the event, I focused on ensuring that the competition included not only the main contest but also additional activities to enrich the participants' knowledge, such as seminars and training sessions on using Schneider PLC software.

International Symposium for Implementing AI in Industry 5.0 (Februari 2024)

At the beginning of 2024, I was appointed as the head of the publication and documentation division for an international symposium held at Universitas Kristen Petra. This event was in collaboration with Universitas Bina Nusantara, featuring speakers such as Dr. Ford from Universitas Bina Nusantara, and Prof. Tokuro Matsuo and Prof. Yuya Yokoyama from the Advanced Institute of Industrial Technology, Japan. The main goal was to introduce Artificial Intelligence into the academic world. I ensured that the event was well-documented and engaging for students.

AI Developer Intern (Juni 2024 - Juli 2024)

During my internship at PT. PAL, I had the opportunity to develop various AI systems that could be implemented within the company. I worked on a safety detection system to identify helmets, glasses, vests, and other safety gear. Additionally, I created several IoT applications to monitor sensors and predict maintenance needs for machinery.

AR (Augmented Reality) for medicine (Juli 2024)

I encountered many challenges in learning about the medical field, so I developed an application to visualize the heart, oral cavity, and other anatomical structures in augmented reality (AR). I used Unity and Vuforia Engine to create this application, which aims to help users better understand various medical concepts and subjects in 3D.

Skills

Hard Skills

VR / AR (Virtual Reality / Augmented Reality)

- Vuforia Engine
- Lightship
- ARCore

Website Development

- HTML, CSS, JavaScript
- Vue JS, Laravel
- Streamlit

App Development

- Kotlin
- Java

Artificial Intelligent (AI)

- Computer Vision
- Chatbot Transformer
- OpenCV
- PyTorch
- TensorFlow
- GANs

Programming Language

- C
- C++
- C#
- Python
- Kotlin
- Java
- JavaScript
- Verilog
- SQL

Internet of Things

- Arduino
- ESP32, ESP8266
- Raspberry Pi (3B+, 4, 5)
- FPGA (pynq Z2)
- Orange Pi Zero 2W
- MQTT
- TCP/IP

Software Design Tool

- AutoCAD
- Fusion 360

Soft Skills

1. Communication
2. Teamwork
3. Problem Solving
4. Time Management
5. Adaptibility
6. Critical Thinking
7. Interpersonal Skill
8. Leadership
9. Creativity
10. Emotional Intelligence
11. Public Speaking