Valentinus Mahendra Aaron Quendangen

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Individuals who are motivated to work hard in carrying out work activities to achieve success and gain experience. Like to learning new things to gain more experience, especially by doing or helping some project or research. During my studies in Biomedical Engineering major at Airlangga University, I learned a loot, including programing (C++, Python, Matlab, JavaScript), analog and digital electronic, anatomy, physiology, and control system.

Education

SMAK Santo Yoseph Denpasar
2016-2019
Science Major

Universitas Airlangga
2019-2023
Biomedical Engineering
Medical Instrumentation Major
GPA/IPK: 3.68

Languages

- Indonesia
- English (Unair ELPT: 540)

Skills

- Programming: Python/MicroPython, C++, Matlab, HTML
- Instrument: Arduino, ESP, Analog Discovery
- Laser cutting, Basic electronic, Electrical circuits, analog and digital electronics, Soldering, PCB design, Graphic design, 3D Printing

Undergraduate Thesis

During my studies in Biomedical Engineering major at Airlangga University, I specialized in the Medical Instrumentation field and conducted a research thesis titled "Design of Electrical Impedance Tomography (EIT) To Detect Breast Cancer Using Analog Discovery Module". This project involved both hardware and software. The hardware consists of some basic circuitry including filter, multi/demultiplexer, VCCS, and instrument amplifier, and the controller using Analog Discovery 2. The software consists of Analog Discovery programming (JavaScript) and EIDORS (Matlab) for the image reconstruction.

Experiences

Organization / Committee

- **FORMAT (Faculty Press Organization)**

Layouter and Designer

- **BKK (Faculty Catholic Organization)**

MEDINFO (Media and Information)
Head of Human Resources Development

Achievements

Best team work at Sebelas Maret International IoT Challange 2021 "IoT Technology For Covid-19 Pandemic Recovery"

Silver award for iMIT SIC 2021 (4th International Malaysia-Indonesia-Thailand Symposioum on Innovation and Creativity 2021) held by UiTM Cawangan Malaysia
"3d (Three-Dimensional) Lung Cancer Detection And Identification Based On Mixed Reality"

Other Experiences

- Mentor on Coding Workshop for Biomedical Engineering 2021
  March 2021 - June 2021 | Teach the basic use and how to make a simple programs using C++ and Python
- Community service activities (Pengmas)
  September 2022 | Training on Making IoT-Based Medical Sensors as an Introduction to Smart Medical Devices for High School/Vocational School Students in Trenggalek Regency, East Java Province | "Training on the Design and Construction of Audiovisual Based Fatigue Detection Tools to Improve Work Quality and Health" (https://doi.org/10.29303/pepadu.v4i2.2370)

- X-Mano (Exoskeleton Hand Robot) for Movement Therapy of Post-Stroke Patients | Merdeka Belajar Kampus Merdeka (MBKM) - Matching Fund

  September 2022 - January 2023 | X-Mano (Exoskeleton Hand Robot) for Movement Therapy of Post-Stroke Patients. Part of the MBKM activities held by the Minister of Education and Culture. This project is a collaboration between IBE-Reality and Airlangga University to develop an exoskeleton hand to help post-stroke patients.
  - 3D Printing, AutoDesk Inventor, Microcontroller, Clinical trial, Entrepreneurship

- Research Engineer Assistant at Neonatal Research Group FK (Faculty of Medicine) Universitas Airlangga

  August 2023 - Present | Assisting in the development of research on the Smart Phototherapy System Airlangga Bilirubin Nesting (AirBiliNest), which is a phototherapy device for jaundiced babies. Assist in assembling, reproduce and testing the prototype as well as implementing the MBKM Matching Fund events related to this device.
  - Skills earned: Troubleshooting, Microcontroller, Design, Laser Cutting, Soldering, Communication, Testing, Demonstrating, RnD

- Enginneer at PT Medika Karya Airlangga
  December 2023 - Present | Focusing on the development of medical devices with the current focus is on the smart phototherapy for jaundiced baby, named AirBiliNest, with the MKA-02 and MKA-03 Models. Charge in managing technical issues, such as the design and assembly of the controller, lamp design, sensor, technical drawing, Android application and web design.
  - Skills earned and used: Troubleshooting, basic electronic, soldering, Microcontroller, PCB design, Graphic Design, Laser Cutting, Soldering, Communication, Testing, Demonstrating, RnD, Android Studio, 3D Printing Design, front-end Web Design, back-end web design.