

RONALD EDWARD

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Summary

A Master of Electrical Engineering from Universitas Brawijaya with a specialization in Control Engineering, passionate about advancing knowledge and practical applications in control systems and automation technologies. Experienced in research, modeling, and simulation of control systems, with strong analytical and problem-solving skills developed through academic projects and research activities. A collaborative team player who enjoys working with diverse teams and is always eager to learn new concepts and technologies. Open to new challenges and experiences that help broaden perspectives, strengthen technical and interpersonal skills, and contribute positively to professional and personal growth. Motivated to continuously improve and develop into a competent engineer capable of contributing to innovation in engineering and technology.

Education

Universitas Brawijaya Master's Degree Electronic Systems and Intelligent Control GPA	Aug 2024 – Des 2025 3.93 (<i>Cumlaude</i>)
Universitas Brawijaya Bachelor's Degree Electrical Engineering GPA	Sep 2020 – May 2024 3.56 (<i>Very Satisfactory</i>)

Experience

Badan Riset dan Inovasi Nasional RI (BRIN RI) – Research Intern

Master Thesis Writing February 2025 – Desember 2025

- Learn and research about control systems and methods in control systems.
- Designed and Combined a Repetitive Controller (RC) with a Control Barrier Function (CBF) to achieve high-accuracy periodic tracking while enforcing safety constraints.
- Achieved near-zero steady-state error and guaranteed control inputs remained within predefined bounds.
- Authored and published scientific papers in international conferences and peer-reviewed journals.
- **Skills:** Control Systems · Optimization Control · MATLAB · Python · LaTeX · Research · Scientific Paper Writing

PT Asia Sampoerna Produk CTP

Senior Product Specialist March 2024 – March 2025

- Master product features, specifications, and competitive advantages.
- Assist in product presentations and demonstrations to clients.
- Explain technical value propositions to prospective customers.
- Support tender processes and technical proposals.
- Provide product training for customers and internal teams.
- Develop training materials and documentation.
- **Skills:** Communication · Problem Solving · Strong technical understanding of the product

Badan Riset dan Inovasi Nasional RI (BRIN RI) – Research Intern

Undergraduate Thesis Writing November 2023 – March 2024

- Learn and research about control systems and methods in control systems.

- Design a plug-in repetitive control and PID controller using Python.
- Design a graphical user interface (GUI) for the plug-in repetitive control method using the tkinter library.
- **Skills:** Python · MATLAB · Research · GUI development

Bangkit Academy led by Google, Tokopedia, Gojek, & Traveloka

Government-led program by Kampus Merdeka collaborating with Google, Tokopedia, Gojek & Traveloka. Designed to prepare students with in-demand skills and tech certifications.

Cloud Computing Learning Path 2023

February 2023 – July 2023

Learning about Cloud Computing from Google Cloud Platform

- One of 5.010 students selected for this program from 67.387.
- Acquiring proficiency in back-end application development and applying best practices on Google Cloud Platform (GCP) to effectively meet product requirements.
- Creating backend APIs and deployment in Android apps for a capstone project with 6 other students from 4 different universities and 3 different learning paths.
- **Skills:** Cloud Computing · Backend · Teamwork · HTML · CSS · Javascript

Himpunan Mahasiswa Teknik Elektro – Universitas Brawijaya (HME FT UB)

Senior Staff of Media Communication and Information

Apr 2022 – Mar 2023

Staff of Media Communication and Information

Apr 2021 – Mar 2022

- Responsible for creating and curating engaging content that aligns with the organization's objectives.
- Creating articles related to the content being showcased. These articles aim to provide additional information, insights, or updates on the topic covered in the content.
- Contribute to enhancing the visibility of the organization in social media, engaging the target audience, and facilitating effective communication within the community.
- **Skills:** Public Relations · Media & Entertainment · Article Writing

Certificate

Associate Cloud Engineer

<https://google.accreditable.com/1cce6d02-6bb4-40bd-9155-8658b76636fc>

Deploy to Kubernetes in Google Cloud Certificate

https://www.cloudskillsboost.google/public_profiles/224a11da-651f-4d1a-be76-b735812ffd26/badges/3714799?utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Menjadi Google Cloud Engineer (Dicoding Indonesia)

<https://www.dicoding.com/certificates/L4PQGGQE4ZO1>

Memulai Dasar Pemrograman (Dicoding Indonesia)

<https://www.dicoding.com/certificates/NVP793O2OZR0>

Project

Master Thesis : Design of a Repetitive Controller Method Integrated with Control Barrier Function for Periodic Signal Tracking - Collaboration with Badan Riset dan Inovasi Nasional (BRIN) Indonesia 2025

Undergraduate Thesis : Design and Analysis Of Plug-in Repetitive Control Method for Minimum Phase Linear System - Collaboration with Badan Riset dan Inovasi Nasional (BRIN) Indonesia 2024

Kitchen's Pal Application (Bangkit 2023 Batch 1 Capstone Project)	2023
Integrated Mobile Phone Door Security System (Capstone Desing Project)	2023
Pengabdian Kepada Masyarakat (PKM) FT-UB 2022 Desa Mojorejo	2022

Publication

International Journal of Robotics and Control Systems – Publisher : Association for Scientific Computing Electronics and Engineering (ASCEE) Jan 2026

Safe Periodic Tracking via a Repetitive Controller with Control Barrier Function Constraints: A Servomotor Simulation Study <https://pubs2.ascee.org/index.php/IJRCS/article/view/2312>

2024 12th Electrical Power, Electronics, Communications, Control and Informatics Seminar (EECCIS) – Publisher : IEEE Oct 2024

On the Design and Analysis of Discrete-Time Plug- in Repetitive Controller with Three Different Internal Models <https://doi.org/10.1109/EECCIS62037.2024.10840060>

Achievements

TOP 10 Finalist PKM PI Maba Dekan Cup FT-UB 2021

Implementation of Technology: "Water Equalizer For Tobacco" - A System for Regulating Moisture Levels in Tobacco Plants Using IoT Principles".

Skills

Python Programming Language, MATLAB, Control System, Optimization Control, LaTeX, Research, GUI Development, Engineering, Critical Thinking, Leadership, Problem Solving, Teamwork, HTML, CSS, Javascript, Backend, Cloud Computing, Image Processing.