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Digital Portfolio: Trisucipto - Portfolio

PROFILE

A final-year Telecommunications Engineering student with a strong passion for Mobile Software Development. A proactive learner, I am dedicated to mastering new technologies and eager to contribute to innovative projects. I am seeking an opportunity to apply my analytical background and collaborative spirit to a dynamic team, driving collective success while fostering my professional growth as a developer.

Key Highlights:

Android Developer | Smart Dorm Key Project: Developed the companion Android application for a smart dorm system, with a core focus on engineering a robust voice verification module for user authentication. I was responsible for the entire mobile development lifecycle, from designing the user interface to implementing the secure authentication logic that served as the primary feature of the product.

Android Developer | AIREAL Application Project: Developed the AIREAL application, which served as the official capstone project for the **Bangkit Academy 2024** (Mobile Development track) under the *MBKM Kampus Merdeka* initiative. I was responsible for the entire mobile development lifecycle, from initial concept and UI/UX design to final implementation and testing, ensuring the delivery of a high-quality application that met the rigorous standards required for program graduation.

Web Developer | Personal Portfolio Project: Developed a custom portfolio website to showcase my technical projects and achievements. My core responsibility was the front-end implementation, where I utilized HTML5 and advanced CSS techniques to build a responsive, visually appealing, and user-friendly interface. This project highlights my ability to manage a development project from concept to completion.

Leadership & Mentorship: A proactive leader with demonstrated experience in both team management and student mentorship. I have successfully led a team to execute a university feedback event and was also entrusted for two consecutive years (2022 & 2023) to serve as an Orientation Mentor, guiding new students during their integration into campus life.

EXPERIENCE - FULL TIME

Bangkit Independent Study (MBKM) (February 2024 - June 2024)

Dicoding Academy (Mobile Development)

- Completed an intensive and competitive study program equivalent to 20 academic credits, specializing in the Mobile Development learning path.
- Mastered native Android development using Kotlin, focusing on building robust applications with modern architecture (MVVM), creating intuitive UI/UX, and integrating with RESTful APIs.
- Developed critical, industry-standard soft skills including effective communication, leadership, and critical thinking through project-based learning and dedicated training modules.
- Collaborated effectively within an agile team environment to design, develop, and deploy a functional e-commerce application as the final capstone project.

Achievements:

- Academic Excellence: Graduated from the intensive program with a final score of 86,72 out of 100, demonstrating a strong command of the mobile development curriculum.
- Innovative Feature Implementation: Successfully engineered and implemented a blur detection feature for the capstone project. This system automatically validated the quality of user-uploaded product images, significantly improving the platform's content standards.
- Project Delivery: Played a key role in the successful delivery of a full-featured e-commerce application, showcasing the ability to translate complex requirements into a functional and user-friendly product within a team setting.

EXPERIENCE - ORGANIZATION

Telecommunication Engineering Student Association (November 2022 – June 2023)

Committee Member & Staff

- Served as Public Relations Coordinator for the "Feedback 2023" event, managing communications and outreach.
- Contributed to the program management of the "Scholarship 2023" initiative for association members.
- Managed logistics, sales, and vendor partnerships for merchandise production as part of the Fundraising Division.
- Assisted in member development and training programs as Advanced Cadre Staff.

University Orientation Committee (PKKMB) (September 2022 & September 2023)
Liaison Officer & Mentor

- Selected for two consecutive years to guide and mentor new students during their university orientation.

- Acted as the primary liaison, providing essential information and support to ensure a smooth transition for the class of 2022 and 2023.

PROJECTS

Capstone Project: AiReal *(Dicoding Academy, 2024)*

Developed a prototype e-commerce application featuring an automated blur detection system. This feature was designed to validate the quality of uploaded product images, ensuring a high standard of visual presentation to attract buyers

- Developed a functional Android application from the ground up using Kotlin and Android Studio.
- Engineered the integration of a backend machine learning model to power the application's core intelligent features.
- Translated high-fidelity UI/UX designs from Figma into clean, responsive, and maintainable XML layouts.

Key Achievement:

- Successful Model Integration: Seamlessly integrated a blur detection machine learning model, enabling the application to perform real-time image quality analysis directly on the user's device.
- Application Stability: Delivered a stable and polished final application, ensuring a smooth and reliable user experience through rigorous testing and debugging.

Capstone Project: Perancangan Smart Dorm Key Berbasis Voice Recognition Dengan Tambahan sensor Fingerprint Sebagai Verifikasi Dua Langkah Untuk Meningkatkan Keamanan *(Telkom University, 2025)*

This project involved the design and development of an Internet of Things (IoT) based smart lock system, specifically tailored to enhance the security of Telkom University dormitories. To address the vulnerabilities of traditional keys, this system implements an advanced dual-verification protocol. Access is granted only after a user successfully passes two sequential biometric checks: voice recognition followed by a fingerprint scan, creating a robust and highly secure entry system.

- Developed a comprehensive IoT system that integrated a smart lock mechanism, a voice recognition module, and a fingerprint sensor into a single, cohesive unit.
- Engineered a sequential two-factor authentication logic where voice recognition serves as the primary verification, immediately followed by fingerprint scanning as the mandatory secondary confirmation.
- Significantly improved security by requiring two distinct biometric credentials, drastically reducing the risk of unauthorized access compared to single-verification methods.

- Designed the system with the specific use-case of a multi-user dormitory environment in mind, providing a secure yet convenient keyless access solution for students.

Key Achievement:

- Developed a high-performance CNN voice recognition model, achieving near-perfect classification scores (0.98-1.00 Precision/Recall/F1-Score).
- Built a functional IoT Smart Lock prototype featuring 2-Factor Biometric Authentication (Voice & Fingerprint) that achieved 91% voice and 100% fingerprint accuracy in ideal conditions.
- Ensured highly responsive real-time communication via Firebase, validated by excellent network performance (average delay 65.84 ms).

EDUCATION

Bachelor of Telecommunications Engineering, Telkom University
(2021-2025)
GPA : 3.39/4.00
EPRT/TOEFL/IELTS : 500
Relevant Course: Algorithms and Programming, Microprocessors and IoT, Python Programming, Mobile Applications, Optical Communication Systems, Data Communication Networks

SKILLS

- **Programming Language:** Java, Python, Kotlin
- **Web Technology:** HTML, CSS
- **Software:** Android Studio, Visual Studio Code, Cisco Packet Tracer, Vercel, Postman.
- **Technical Skills**: Topologi Designer, UI/UX Designer, Web Designer, Mobile Developer
- **Management Skills**: Team Leadership , Operations Management , Project Management.