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As an electronics and computer enthusiast, I'm passionate about IoT and microcontrollers, building Arduino-powered devices that connect to my home server. My background includes experience with microcontroller implementation for UAVs and drones, as well as web development using LAMP/LEMP and Laravel-based stacks. Through my participation in Gamaforce UGM and Bangkit Academy, I've gained expertise in cloud computing, including infrastructure deployment, AI model inference, and various deployment models like PaaS, IaaS, containerized, serverless and automation tools. My experience has equipped me to make informed decisions about the best deployment strategy for different projects.

Education

Dept. of Computer Science and Electronics

Gajah Mada University, Yogyakarta

B. Sc. in Electronics and Instrumentation

2019 – 2023

GPA – 3.77/4.00

Cloud Computing · Microcontrollers and embedded systems · Computer networks · Web programming · Data analysis and visualization

Relevant Coursework

CI/CD: Jenkins, Github Actions

Linux: Bash scripting, Python scripting, Ansible

Computer Network: VPC management, firewall, DNS

Containers: Docker, Kubernetes

Web Development: Laravel, Node.js, SQL, Bootstrap

Cloud: AWS, DigitalOcean, GCP

Experience

PukulEnam

Jun 2022 – Jul 2024

Cloud Engineer

Remote

- **Cost-Effective Cloud Optimization:** Led the complete migration of newsletter infrastructure from AWS to DigitalOcean, reducing costs by 50%, and optimized cloud operations using Python, bash scripting and utilized Docker's reusable layer for improved efficiency.
- **Automated Systems and AI Integration:** Developed automated systems using Selenium, Python, and APIs to send articles, generate statistics, and integrate with platforms like Discord, WhatsApp, and Twitter. Implemented Gemini 1.5 LLM for automated grammar checks, ensuring high-quality content.
- **Security and Network Expertise:** Implemented secure cloud configurations, including firewalls, bastion servers, and OpenVPN for remote access. Experience with Nginx reverse proxying and rate limiting (combined with Fail2ban) enhances security and accessibility. Experience with DAST tools such as OWASP ZAP.

Web Developer

- **Developed and implemented a high-performance, real-time financial data API:** This API powers the company's newsletter, providing users with dynamic and accurate exchange rates and stock information.
- **Automated content generation and personalization for email marketing:** This streamlined content creation by using JSON endpoints, increasing efficiency and improving user engagement.
- **Led the redesign of the company's main page, enhancing user experience:** This project resulted in a modern and intuitive interface, improving website usability and user satisfaction.

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

Feb 2022 – Jul 2023

Cloud Computing Learning Path Mentor

Remote

- **Mentored aspiring cloud professionals:** Guided a cohort through a comprehensive learning path, providing personalized advice and support.
- **Prepared students for GCP ACE certification:** Delivered engaging sessions focused on exam topics, empowering students to achieve professional validation.
- **Cultivated a collaborative learning environment:** Fostered communication and camaraderie through interactive activities and games.

Company Capstone Contributor

- **Mentored Bangkit Academy students at PukulEnam, advising on technical solutions for their capstone projects, including microservices, VM deployment, and containerization.**
- **Facilitated knowledge transfer in REST API development and integrating machine learning into web applications, enabling students to build cohesive web applications.**

Cloud Engineer

- **Cloud Computing Expert:** Graduated with distinction in Cloud Computing from Bangkit Academy, specializing in Google Cloud Platform (GCP) technologies like Kubernetes and Compute Engine.
- **Leadership & Problem-Solving:** Led a team to success in a company capstone project, showcasing leadership, collaboration, and problem-solving skills through AI development.
- **Automation & Efficiency:** Experienced in automation tools like Ansible, Terraform, and Jenkins to streamline infrastructure provisioning, configuration management, and CI/CD processes.

Gamaforce UGM

Hardware Programmer

Nov 2019 – Feb 2022

Sleman, Yogyakarta

- Developed a loitering algorithm using C++ and Git, enabling precise semi-circular flight patterns for a UAV: This involved integrating STM32 and Raspberry Pi hardware, utilizing the Haversine formula for accurate navigation, and implementing a robust control system.
- Successfully tested and validated the algorithm through simulations and real-world flight trials, ensuring stable and responsive flight behavior: This involved rigorous testing to ensure the algorithm functioned as intended in both controlled and real-world environments.
- Contributed to the development of a comprehensive control system for the UAV, ensuring stable and responsive flight behavior: This involved collaborating with a team to design and implement the system, contributing to the overall functionality and reliability of the UAV.

Elins Research Club UGM

Web Developer

Aug 2021 – Dec 2021

Sleman, Yogyakarta

- Built a user-friendly dashboard: Developed an intuitive dashboard using PHP, JavaScript, and Bootstrap to monitor sensor data in real-time.
- Integrated with Telkom LoRaWAN: Established secure communication with the network using RESTful APIs for efficient data retrieval.
- Enabled data visualization and reporting: Implemented robust visualization and reporting tools to analyze sensor data, providing insights for decision-making.

Gadjah Mada Robotic Team

Computer Vision Developer

Aug 2019 – Nov 2019

Sleman, Yogyakarta

- Creating a simple computer vision program for robot imaging using OpenCV for detecting objects.

Projects

Automated Twitter (X) account | *Python, Selenium, Twitter API*

April 2024

- Selenium Python (Chromium) retrieves data from the internet which is about Linux-related news.
- Using Twitter API, randomly selected news posts for every 30 minutes.
- Preview example at https://x.com/linux_ly ↗

Automated Docker Image Creations | *GitHub Actions*

April 2024

- As the part of CI/CD practices
- <https://github.com/gabrielkheisa?tab=packages> ↗

Automted News Portal | *Python, Selenium*

November 2022

- Selenium Python (Chromium) gets 4 latest news from selected news portals.
- Returns data in JSON.
- Preview example: <https://news.gabrielkheisa.xyz/> ↗

BMKG Earthquake map API | *Python, Selenium, OpenStreetMap, Leaflet JS*

October 2022

- Selenium Python (Chromium) gathers table data from BMKG official site.
- Returns data in JSON.
- Preveiw site utilizes Leaflet JS and OpenStreetMap
- Preview example at https://maps.gabrielkheisa.xyz/earthquake_map/ ↗

Video Meme Generator | *Python, ffmpeg, LEMP, Docker*

October 2020

- Generate subtitles and render it into a video with ffmpeg using LEMP stack and Python.
- Preview example at <https://meme.gabrielkheisa.xyz/> ↗

Honors and awards

Best Team at Bangkit Company Capstone Project | *Associated with Bangkit Academy*

Jul 2022

- for being selected as the Best Team at Bangkit Company Capstone Project in collaboration with PukulEnam ↗

Graduate with Distinction | *Associated with Bangkit Academy*

Jul 2022

- for successfully completing Bangkit, specializing in Cloud Computing, with Distinction (top 10% graduate) ↗

EU Social DigiThon 2021 | *by Ambassador of the EU to Indonesia and Brunei Darussalam*

Nov 2021

- Finalist, with the project "DigiCypher Project", as a Finalist of the EU Social DigiThon 2021: "Fighting Cyberbullying Towards Children" ↗

National Flying Robot Contest 2021 | *by Ministry of Research, Technology and Higher Education*

Nov 2021

- 1st winner, in technology development category by contributing in loitering algorithm for fixed-wing UAV in Gamaforce UGM (Khageswara Team) ↗

Farmasi Innovative Academy | *by Faculty of Pharmacy, Gadjah Mada University*

Nov 2021

- 1st winner, as The Best Product of Finnovacad Entrepreneurship Exhibition 2021 (Medicatia Team) ↗

Licenses and certifications (Relevant to DevOps)

Belajar Implementasi CI/CD | *Dicoding* ↗

Sep 2024

Menjadi Linux System Administrator | *Dicoding* ↗

Aug 2024

Architecting with Google Compute Engine Specialization | *Coursera* ↗

May 2022

Preparing for Your Associate Cloud Engineer Journey | *Coursera* ↗

Apr 2022

PCAP: Programming Essentials in Python | *Cisco Networking Academy* ↗

Jul 2021