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EXPERIENCE IN INFORMATION & TECHNOLOGY

2025-Present **SOFTWARE ENGINEERING & DATA LABORATORY 2025**

Sleman, Yogyakarta

Research Project

- Implemented a **Multi-Agent RAG system** using **LangChain**, **OpenAI LLMs**, and three graph-based backends: **Neo4j (Cypher)**, **Neo4j + Vector Search**, and **GraphDB (SPARQL using Virtuoso)**.
- Designed an evaluation pipeline comparing each agent's response accuracy on 5 complex cybersecurity queries, using MITRE ATT&CK as ground truth reference.
- Conducted ongoing evaluation under lecturer supervision

Community Engagement MTA Gunung Kidul

- Designed and deployed a **Looker Studio dashboard** to visualize attendance data across **14 MTA branches**, helping local organizers track participant distribution during "pengajian".
- Integrated the dashboard with **Google Sheets** to display real-time attendance from digital forms; supported **16+ attendees** during launch day.
- Introduced **data visualization concepts** to non-technical community stakeholders, aiming to increase awareness of data-driven insights in underdigitized regions

2025

GEMASTIK COMPETITION 2025

Sleman, Yogyakarta

Smart Device, Embedded System & IoT – Fullstack Web Dev & Cloud Engineer

- Optimized asset delivery by converting images to **WebP** and applied **React hooks** (useMemo, useCallback) to reduce render overhead and improve load performance.
- Built an intelligent "knalpot brong detection system" integrating IoT sensors, embedded devices, and cloud-based automation—recognized as a national finalist in **GEMASTIK 2025 (Smart Device, Embedded System & IoT)**.
- Engineered the fullstack web platform using **React.js (Vite)** and **TailwindCSS**, enabling real-time monitoring and visualization
- Developed and deployed backend infrastructure on **Firebase and Google Cloud**, leveraging **Cloud Functions**, **Firestore**, and **Cloud Storage** for event-driven video processing and data management.
- Integrated an ML-powered license plate extraction model via **Google Cloud Run**, automating video analysis workflows from raw recordings to processed outputs
- Designed seamless communication between SBC devices (Raspberry Pi) and cloud services—facilitating automatic upload and trigger-based (event-based) data flow.
- Collaborated within a 3-member multidisciplinary team covering IoT hardware, ML modeling, and cloud software, ensuring reliable deployment and production-level scalability.

2025

GELANGGANG EXPO UGM 2025

Sleman, Yogyakarta

IT Division – Frontend Web Developer

- Built the **Geleverse mini-game** and an interactive "UKM Apakah Aku?" quiz page using **Next.js**, **TypeScript**, **React**, and **Tailwind CSS**, architecting all UI as modular, reusable components.
- **Framer Motion** animations library is used for smooth state transitions between quiz questions and results.
- Optimized asset delivery by converting images to **WebP** and applied **React hooks** (useMemo, useCallback) to improve load performance.
- Collaborated closely with UI/UX designers (Figma) and other Frontend teammate, managing code via **GitHub** and a **Kanban** workflow to ensure on-time feature delivery.

2024-Present **OMAHTI**

Sleman, Yogyakarta

Head of Research and Competition Managerial Division (2025)

- Co-led an 8-day Software Engineering bootcamp for **30 participants**, delivering **5 teaching sessions and 1 consultation day** focused on backend fundamentals and real-world project implementation.
- Led a 4-member division responsible for managing research, competition, and internship information channels within the organization.

- Established dedicated communication groups for competitions, workshops, and research initiatives, ensuring smooth information flow and higher member participation.
- Coordinated the publication of **OTIChamp**, a recognition initiative highlighting internal competition achievements, in collaboration with the Content and Design team.
- Supported the mentoring process for **GEMASTIK** competition participants, helping prepare teams for national-level challenges.
- Facilitated competition reimbursements through coordination with the **Department of Computer Science and Electronics (DIKE)** via **SIMBADA**.

Teaching Assistant Software Engineer at OmahTI Academy Event (2025)

- Co-led an 8-day Software Engineering bootcamp for **30 participants, delivering 5 teaching sessions and 1 consultation day** focused on backend fundamentals and real-world project implementation.
- Taught key engineering concepts including **SDLC**, version control with **Git & GitHub**, authentication using **sessions and Redis**, and database interaction via **Prisma ORM**.
- Designed and presented structured live coding sessions using **Next.js, TypeScript, and Docker**—guiding participants through hands-on problem solving and code scaffolding.
- Provided **one-on-one mentoring** and troubleshooting support during and after sessions to **help students overcome technical challenges** and solidify understanding.
- Evaluated and reviewed participants' final projects, giving constructive feedback and ensuring adherence to best practices in software architecture and version control.
- Collaborated closely with the lead mentor to synchronize teaching materials and maintain high participant engagement throughout **online Zoom-based sessions**.

Instructor Class Web Developer at OmahTI Academy Event (2025)

- Designed and delivered a **6-day, 12-hour** Web Developer bootcamp for **30** participants, covering HTML5 semantics, CSS fundamentals, JavaScript & DOM, and React.
- Authored **4 comprehensive modules** (>200 pages) on HTML, CSS, JavaScript, and React concepts—creating clear, structured materials for theory and hands-on practice.
- Led interactive live-coding sessions via **VSCode Live Share** and **Zoom**, guiding students through building a complete React/Tailwind to-do app and final portfolio project.
- Prepared and provided **Figma-based final project** guidelines, enabling all participants to design and implement creative, production-ready portfolio sites.
- Delivered targeted Q&A support—resolving 6+ individual queries and fostering peer discussion in a dedicated group—to ensure 100% of attendees met learning objectives.
- Collaborated with the event and academic teams to align curriculum, schedule, and assessments, ensuring smooth execution and high participant engagement.

2024

MALPRES MIPA 2024

Sleman, Yogyakarta

IT Division – Frontend Web Developer

- Developed and deployed the **Next.js** landing page and nomination/voting platform—handling **Vercel** deployment and custom domain setup (malpresmipa2024.com).
- Built an interactive nomination list with **Google Sheets API** integration, enabling **469+ FMIPA members** to cast votes seamlessly.
- Collaborated with UI/UX designer and backend engineer (Next.js API routes) using **GitHub** and **Figma**, aligning design and data flow for a cohesive product.
- Took ownership of critical path tasks—domain registration and deadline coordination—delivering the platform on time despite a tight schedule.

EDUCATION

2023-Present **UNIVERSITY OF GADJAH MADA**

Sleman, Yogyakarta

Undergraduate Computer Science Student, GPA 3.83/4.0

- Relevant coursework: Software Engineering Methods; Scalable Software Development; Software Design Implementation Workshop; Cloud Computing; Databases; Algorithms & Data Structures

COURSES

THE WEB DEVELOPER BOOTCAMP

74 Hours, Udemy – Colt Steele

- Certificate No: UC-3510ecac-63fb-428e-8706-3ed76fe951f8

OTHERS

Languages	Indonesian (Native), English (Okay)
Programming Languages	JavaScript, TypeScript, Java, Python
Tech Stack	React.js, Next.js, SpringBoot, Firebase, Google Cloud Platform, Neo4J, Langchain, Langgraph, PostgreSQL, MySQL, Redis, Docker
Domains	Software Engineering, Computer Vision