

# NISRINA ZAKIYAH

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## PROFESSIONAL SUMMARY

Information Systems and Technology student at Institut Teknologi Bandung with hands-on experience in full-stack web development, computer vision, IoT systems, and DevOps. Proficient in designing and deploying production-ready applications using React, Node.js, Flask, Docker, and PostgreSQL. Passionate about software engineering, cybersecurity, networking, and game development, with a track record of delivering real-world projects across multidisciplinary team environments.

## EDUCATION

**Institut Teknologi Bandung (ITB)** 2024 – Present  
*Bachelor of Information Systems and Technology*

## TECHNICAL SKILLS

|                            |                                                                               |
|----------------------------|-------------------------------------------------------------------------------|
| Programming Languages      | : C, C++, C#, Java, Python, JavaScript                                        |
| Web Development            | : HTML5, CSS3, React, Next.js, Node.js, Vite, Express.js, Django, Flask, Qwik |
| Databases                  | : MySQL, MariaDB, PostgreSQL, SQLite                                          |
| DevOps & Cloud             | : Docker, Nginx, Git, GitHub, Cloudflare, Vercel                              |
| Computer Vision & IoT      | : OpenCV, YOLOv26, DeepSORT, Arduino, Node-RED, MQTT, Mosquitto               |
| Networking & Cybersecurity | : Linux, Nmap, Wireshark, Cisco Packet Tracer, Burp Suite, Ghidra, SpiderFoot |
| Data & Analytics           | : NumPy, Pandas, Matplotlib, SciPy                                            |
| Game Development           | : Unity                                                                       |
| Design Tools               | : Figma, Procreate                                                            |

## CERTIFICATIONS

**BNSP Junior Web Programmer** 2023 – 2026  
*Badan Nasional Sertifikasi Profesi (BNSP)*

## EXPERIENCE

**Robotic Software Control Department Member** 2025 – Present  
*Aksantara ITB Ground Control Station Team*

- Developed and maintained ground control station (GCS) software for UAV systems within a multidisciplinary engineering team

## PROJECTS

**AquaWatch – AI-Powered Drowning Detection and Beach Monitoring System**  
GitHub: [github.com/bellechillguy/Aquawatch--Edge-Based-Drowning-Detection-and-Beach-Monitoring-System](https://github.com/bellechillguy/Aquawatch--Edge-Based-Drowning-Detection-and-Beach-Monitoring-System)  
Stack: YOLOv26, DeepSORT, OpenCV, Flask, PostgreSQL, React, Vite, MQTT, Docker

- Engineered an end-to-end drowning detection system integrating real-time computer vision with YOLOv26 and multi-object tracking via DeepSORT for aquatic safety monitoring

- Designed MQTT-based IoT communication pipeline between Raspberry Pi edge devices and a Flask/PostgreSQL backend with Socket.IO for real-time alert generation and incident logging
- Built a React/Vite web dashboard for live monitoring, configurable danger zone management, camera configuration, and alert history
- Containerized the full application stack with Docker Compose for reproducible edge-to-cloud deployment

### **Moody – Full-Stack Mood Tracking Platform with VPS Deployment**

GitHub: [github.com/bellechillguy/Mood-Tracking-Platform-with-VPS-Based-Deployment--Moody-](https://github.com/bellechillguy/Mood-Tracking-Platform-with-VPS-Based-Deployment--Moody-)

Stack: Node.js, Express.js, SQLite, JavaScript, HTML/CSS, Docker, JWT, Nginx, Cloudflare

- Developed a full-stack web application with role-based dashboards for patients, psychologists, and administrators using a Node.js and Express.js REST API
- Deployed on a Linux VPS with Docker containerization and Nginx reverse proxy; configured Cloudflare Tunnel for secure custom domain routing
- Implemented JWT-based authentication and role-based access control (RBAC) to enforce secure data access across all user roles

### **SIMFASOR – Sports Facility Management and Reservation System**

GitHub: [github.com/zal1zal/IF2050-2026-K01-G07-SIMFASOR](https://github.com/zal1zal/IF2050-2026-K01-G07-SIMFASOR)

Stack: Java, Maven, MySQL

- Built a Java application following MVC architecture for facility scheduling, reservation management, and automated user notifications
- Implemented reservation conflict detection and real-time facility status tracking for streamlined operations management
- Collaborated across the full SDLC including system analysis, implementation, and testing with Maven build tools

### **NimonsCooked! – Multiplayer Cooking Game**

GitHub: [github.com/Nizreal/K01-E-Tugas-Besar-IF2010-Pemrograman-Berorientasi-Objek-STI](https://github.com/Nizreal/K01-E-Tugas-Besar-IF2010-Pemrograman-Berorientasi-Objek-STI)

Stack: Java, JavaFX

- Developed a JavaFX-based multiplayer cooking game applying object-oriented programming principles and software design patterns
- Implemented real-time game logic, player interaction systems, and graphical user interfaces using the JavaFX rendering pipeline

### **Rumah Sakit Nimons – Hospital Management System**

GitHub: [github.com/Labpro-22/if1210-tubes-2025-k03-e](https://github.com/Labpro-22/if1210-tubes-2025-k03-e)

Stack: C

- Developed a hospital management system in C implementing role-based access control (RBAC) for manager, doctor, and patient roles
- Designed modular Abstract Data Types (ADTs) with efficient searching and sorting algorithms for structured clinical data management

## **ORGANIZATIONS**

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### **Visual Artist**

2026 – Present

*GIM ITB – Game Development Community*

- Created original visual assets and artwork for game development projects, collaborating with developers to integrate design into interactive game environments

## **VOLUNTEER EXPERIENCE**

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### **Staff, Event Division**

Sep 2024 – Oct 2024

*Chairman Election STEI-K ITB*

- Coordinated logistics and managed communications for the student electoral process, ensuring transparency and smooth participant experience

### **Lead Operator – Bioskop AMI**

Oct 2024 – Feb 2025

*Aku Masuk ITB 2025 – Event Organizer*

- Led end-to-end operations for a cinema-themed event segment within a large-scale university orientation program

**Graphic Designer**

Sep 2024 – May 2025

*TPB Cup 2024*

- Designed promotional visual materials and event assets for a university sports and culture competition using Figma and Procreate

**ADDITIONAL INFORMATION**

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**Graphic Design Portfolio:** [canva.link/ilitztq92lrp0ac](https://canva.link/ilitztq92lrp0ac) | **Technical Blog:** [medium.com/@bubbellegum](https://medium.com/@bubbellegum)