

Muhammad Salman Maulana

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SUMMARY

Computer Science student at IPB University focused on trustworthy AI, cybersecurity, and product development. I build and teach systems that connect forecasting, sustainability, education, and real-world decision support.

EDUCATION

IPB University (Bogor Agricultural University)
Bachelor of Computer Science

Bogor, Indonesia
Expected 2027

EXPERIENCE

Teaching Assistant – Artificial Intelligence & Information Security

Jan. 2026 – Jun. 2026

IPB University

Bogor, Indonesia

- Assisted laboratory sessions for Artificial Intelligence and Information Security courses, supporting students through hands-on technical exercises.
- Guided debugging, machine learning implementation, and security fundamentals in structured classroom environments.

Cyber Security IPB (CSI)

Sep. 2023 – Present

Core Team Member (2023–Present) | Former Secretary (2024–2025)

Bogor, Indonesia

- Represented IPB in 28 CTF competitions, including 12 international and 16 national events, with approximately 5 national finalist appearances.
- Contributed to technical training, event coordination, and cybersecurity activities spanning web security, reverse engineering, forensics, cryptography, OSINT, and Linux systems.

Product Development & Venture Exploration

2025 – Present

Independent Projects

Bogor, Indonesia

- Exploring technology-driven solutions in sustainability, forecasting, and educational applications through iterative product development.
- Conducting user discovery, problem validation, and prototype development while evaluating long-term product opportunities.

PROJECTS

Carbon Twin | *Next.js, TypeScript, Python, AI Forecasting*

Sep. 2024 – Dec. 2024

- Designed an AI-powered residential solar platform combining forecasting, carbon awareness, and financial feasibility.
- Framed sustainability data as user-facing decision support to help households compare energy impact, cost tradeoffs, and adoption readiness.

Quran Web Platform | *Next.js, React, TypeScript*

Mar. 2025 – Aug. 2025

- Built a responsive Quran reading platform focused on accessibility, typography, fast navigation, and clean content rendering.
- Designed a low-friction reading experience with predictable controls across mobile and desktop devices.

Facility Booking System | *Next.js, TypeScript, PostgreSQL*

Feb. 2026 – May 2026

- Built a full-stack campus reservation system with authentication, booking flows, approval status, and admin dashboards.
- Modeled facility requests in PostgreSQL to make availability, review states, and administrative decisions easier to track.

Solar Power Forecasting Using PatchTST | *Python, PyTorch, Pandas, Scikit-Learn*

Jan. 2026 – Jun. 2026

- Developed a transformer-based forecasting pipeline for residential photovoltaic generation using solar and meteorological data.
- Handled preprocessing, feature engineering, statistical evaluation, and uncertainty-aware analysis for sustainable energy planning.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C/C++

Frameworks: React, Next.js, Node.js, PostgreSQL, REST API

AI/Data: PyTorch, TensorFlow, Keras, Scikit-Learn, Pandas, NumPy

Tools: Git, Docker, Linux, Jupyter Notebook, VS Code