Praditya Wicaksono, S.Pd., M.Kom.

Semarang, Central Java, Indonesia • aditwicaksono34@gmail.com
adit-wicaksono.web.app • linkedin.com/in/praditya-wicaksono-a825652b6

PROFESSIONAL SUMMARY

Lecturer and researcher in Computer Science with a strong foundation in Computational Physics and a Master's degree in Informatics Engineering (GPA: 3.96/4.00). Teaching experience spanning undergraduate laboratory instruction, high school physics education, and national seminar guest lectures. Research focus on AI in Education — specifically Intelligent Tutoring Systems with hybrid RL + LLM architectures. Published at Scopus-indexed conferences (ICAMIMIA 2025) with a paper under IEEE review. Experienced in curriculum design, academic mentoring, scientific methodology training, and community outreach in research methodology (LaTeX, Python, Mendeley).

EDUCATION

Universitas Dian Nuswantoro — **Semarang, Indonesia**
Master of Computer Science (M.Kom.) in Informatics Engineering — GPA: 3.96/4.00 — 2024 – 2026 (Expected)

- Research Focus: Integration of Artificial Intelligence (AI) in Intelligent Tutoring System based on adaptive pedagogical policies.
- Core Courses: Advanced Machine Learning, Natural Language Processing (NLP), Multivariate Data Analysis.

Universitas Negeri Semarang — **Semarang, Indonesia**
Bachelor of Education (S.Pd.) in Physics Education — GPA: 3.15/4.00 — 2018 – 2023

- Focus Areas: Computational Physics, numerical methods, scientific programming, applied statistics, and pedagogical methodology.

TEACHING & ACADEMIC EXPERIENCE

Laboratory Assistant (Computational Physics & Programming Algorithms) — **Semarang, Indonesia**
Universitas Negeri Semarang — 2021 – 2023 (2 Years)

- Guided undergraduate laboratory classes for Computational Physics and Basic Programming Algorithms courses using Python and C++.
- Assisted lecturers in grading weekly programming assignments, designing lab exercises, and administering final exams.
- Supervised 25+ students per semester across 4 semesters, providing individual feedback on code quality and numerical analysis techniques.

Physics & Astronomy Teacher (Public Education) — **Semarang, Indonesia**
Senior High School (SMA) — 2023 – 2024

- Taught physics and coached the regional Astronomy Olympiad team, focusing on numerical analysis, celestial mechanics, and computational modeling.
- Designed active learning curricula integrating Python simulation scripts to make abstract physics concepts tangible through code.

Research & Community Outreach Facilitator — **Semarang, Indonesia**
Academic / Research Consultant — 2023 – Present

- Conducted community outreach workshops on scientific methodology, LaTeX typesetting for scientific papers, Mendeley, and Python for statistical analysis.
- Served as a guest speaker for the CIMSA (Center for Indonesian Medical Students' Activities) national scientific seminar, lecturing on medical meta-analysis research design.
- Facilitated cross-university research methodology standardization through collaborative SLR framework development.

PUBLICATIONS & SCIENTIFIC RESEARCH

Stock Market Prediction and Time-Series Forecasting using Multi-Head Attention
P. Wicaksono, R. A. Pramunendar — Status: Accepted / In Press — Awaiting Publication (2026)

- Developed stock market prediction models based on Attention Mechanisms to capture long-term dependencies.
- Outperformed traditional LSTM models in prediction accuracy with a significant reduction in Mean Squared Error (MSE).

MAESTRO: A Hybrid Q-Learning and Large Language Model Architecture for Intelligent Tutoring Systems with Adaptive Pedagogical Policies
P. Wicaksono, P. N. Andono, Pujiono — Status: Under Review (IEEE Conference, 2026)

- Designed a hybrid AI architecture modeling students' learning progress based on the ZPD (Zone of Proximal Development) framework.
- System publicly deployed for pilot studies at: `https://maestro-4dcce.web.app/`
- Additional Output: Computer Program Copyright / HAKI (Intellectual Property Rights) in the registration process.

AI PROJECTS FOR TEACHING & RESEARCH

MAESTRO — Adaptive Learning Platform — **Q-Learning, LLM, Flutter, Firebase**
Hybrid AI tutoring system for adaptive content sequencing — 2025 – 2026

- Architected a hybrid Q-Learning + LLM framework that adapts instructional content based on individual student progress and Zone of Proximal Development.
- Cross-platform Flutter frontend with Firebase backend for real-time state management and offline-first data synchronization in low-bandwidth environments.
- Demonstrates how AI research can transition from simulation to practical classroom deployment — currently under IEEE review.

Lectura — Academic Presentation Engine — **Node.js, Reveal.js, Docker**
Markdown-to-slides tool designed for educators — 2025 – 2026

- Built a Node.js engine converting Markdown to interactive presentations with real-time LaTeX support — reducing slide preparation time for educators by 85%.
- Docker containerized, deployed on Fly.io, used by a small group of educators for creating academic presentations without visual formatting overhead.
- Live at: `https://lectura-edu.fly.dev/`

Udinus LaTeX Thesis Template **LaTeX, XeLaTeX, Biber**

Open-source thesis template with arXiv citation integration 2025

- Developed a production-ready LaTeX thesis template for Udinus Master's program — one-command compilation, adopted by fellow students (2 forks).
- Integrated MCP arXiv for direct BibTeX citation fetching from source, reducing bibliography assembly from hours to minutes.
- Open-source at: `https://github.com/aditwicaksonodinus/udinus-thesis-template-latex`

TECHNICAL SKILLS & COMPETENCIES

Teaching & Pedagogy: Curriculum Design, Active Learning, Academic Mentoring, Workshop Facilitation, Scientific Methodology, Research Supervision.

Research & AI: Artificial Intelligence, Machine Learning, Deep Learning, Reinforcement Learning, Intelligent Tutoring Systems, Data Science & Statistics.

Programming & Tools: Python, R, SQL, C++, LaTeX, Git/GitHub, PyTorch, TensorFlow, Scikit-Learn, Mendeley, VS Code.

Languages: Indonesian (Native), English (Academic & Professional).