CURRICULUM VITAE

- PROFILE -



Ben Rahman earned his Bachelor's degree (2012) and Master's degree (2017) in Information Systems from Bina Nusantara University, and completed his Ph.D. in Computer Science at the same institution in 2024. Before entering academia, he gained extensive professional experience across multinational technology companies, holding both engineering and leadership roles in several countries. Since 2018, he has been a faculty member at Universitas Nasional, Indonesia. His core expertise lies in Computational Intelligence, AI Optimization, Medical AI, Agentic AI, LLMs, encompassing the development and application of machine learning, deep learning, and hybrid intelligent systems to address complex real-world problems. His doctoral dissertation focused on abnormal EKG detection using machine learning, establishing CI as a foundation in biomedical intelligence. He later expanded into text and business intelligence, with a notable IEEE Access (2024) publication on BERT-based sentiment analysis for customer satisfaction optimization. Currently, his research advances toward hybrid and neuro-symbolic CI frameworks, integrating Declarative Structured Programming (DSPy) with Chain-of-Thought reasoning to design culturally-grounded, adaptive AI-Education systems. Through these trajectories, his publications consistently demonstrate a coherent research line under the umbrella of Computational Intelligence, spanning biomedical signal intelligence, business intelligence, and educational intelligence. This positions him as a scholar committed to building a solid foundation in Computational Intelligence, with impactful contributions and a vision to become a leading reference both nationally and internationally.

Short Profile (MC Intro):

In English

Dr. Ben Rahman is a faculty member at Universitas Nasional, Indonesia. He earned his Ph.D. in Computer Science from Bina Nusantara University, focusing on Computational Intelligence (CI), including machine learning, deep learning, and hybrid intelligent systems. His research spans biomedical signal intelligence, business intelligence, and educational intelligence, with notable publications such as an IEEE Access article on BERT-based sentiment analysis. Dr. Rahman is committed to advancing Computational Intelligence as a foundation for impactful, real-world AI systems.

In Bahasa

Dr. Ben Rahman adalah dosen di Universitas Nasional, Indonesia. Beliau meraih gelar Doktor Ilmu Komputer dari Universitas Bina Nusantara dengan kepakaran di bidang Computational Intelligence (CI), meliputi machine learning, deep learning, dan hybrid intelligent systems. Risetnya mencakup biomedical signal intelligence, business intelligence, dan educational intelligence, dengan publikasi di jurnal internasional bereputasi, termasuk IEEE Access. Dr. Rahman aktif mengembangkan Computational Intelligence untuk solusi AI yang berdampak nyata bagi masyarakat.

https://Ben-rahman.github.io

Personal Information

Name: Dr. H. Benrahman, B.Sc., S.Kom., MMSI, CPS

Email: ben.rahman@gmail.com

Phone: +62 811 8703 355

Location: Jakarta, Indonesia

IEEE Membership: Pending Merge (Multiple past accounts)

Educational Background

Ph.D. in Computer Science – Universitas Bina Nusantara, 2024

MMSI in Information Systems – Universitas Bina Nusantara, 2017

S.Kom. in Information Systems – Universitas Bina Nusantara, 2012

B.Sc. in Management Information Systems – AMIK YPTK Padang, 1987

CPS – Certified Productivitas Specialyst, APO-2025

Professional Experience – 38+ Years in IT

1987–1992: Programmer & System Analyst – PT Semen Padang

1992–1996: IT Supervisor – Alcatel Cable

1996–1998: Head of IT Department – PT South Pacific Viscose (SPV)

1998–2006: Assistant IT Manager – International SOS

2006–2018: ICT Manager – Medika Plaza

2024–2027: Director of Inovasion and Teknology – APPRODI

2025–2028: Chair, Doctor of Computer Science Alumni Association (IKA-DCS), Bina Nusantara University

Academic Positions

Universitas Nasional – Lecturer, 2018–Present

Universitas Bakrie – Lecturer, 2014–Present

Politeknik Negeri Jakarta – Lecturer, 2017–2019

Sekolah Tinggi Teknologi Jakarta – Lecturer, 2017–2019

Selected Publications (WoS, Scopus, and arXiv)

[1]. Rahman, B, et al., "**AI based sagittal spinal posture assessment for adolescent screening in low resource school settings,**" **Scientific Reports**, **2026**, doi: 10.1038/s41598-026-36634-8. **Q1-Scopus.**

[2]. Rahman, B, et al., "**IDChat: Toward a universal, multi-biometric digital identity for next-generation secure communication in ASEAN,**" **IEEE Access**, vol. 14, pp. 14892-14902, **2026**, doi: 10.1109/ACCESS.2025.3645071. **Q1-Scopus.**

[3]. Rahman, B, et al., "**Optimizing Customer Satisfaction Through Sentiment Analysis: A BERT-Based Machine Learning Approach to Extract Insights,**" in **IEEE Access**, vol. 12, pp. 151476-151489, 2024, doi: 10.1109/ACCESS.2024.3478835. **Q1-Scopus.**

[4]. Rahman, B, et al., "**Optimizing plant watering efficiency via IoT: Fuzzy Sugeno method with ESP8266 microcontroller,**" **TEM Journal**, 13(3), 1849–1857. **2024**, doi: 10.18421/TEM133-13, **Q3-Scopus.**

[5]. Rahman, B, et al., "**Detection of Student Sleepiness Using U-Net and Conv-LSTM Methods to Improve Learning Quality,**" **International Conference on Technology, Engineering, and Computing Applications (ICTECA)**, Semarang, Indonesia, **2023**, pp. 1-5, doi: 10.1109/ICTECA60133.2023.10490499.

[6]. Rahman, B, et al., "**Development of an Image-Based Road Pothole Detection Model with U-Net implementation,**" **The 9th International Conference on Computing, Engineering and Design (ICCED)**, Kuala Lumpur, Malaysia, **2023**, pp. 1-6, doi: 10.1109/ICCED60214.2023.10425723.

[7]. Rahman, B, et al., "**Heart Disease Classification Model Using K-Nearest Neighbor Algorithm,**" **The Sixth International Conference on Informatics and Computing (ICIC)**, Jakarta, Indonesia, **2021**, pp. 1-4, doi: 10.1109/ICIC54025.2021.9632918.

[8]. Rahman, B. et al. **"Context-Aware Semantic Segmentation: Enhancing Pixel-Level Understanding with Large Language Models for Advanced Vision Applications." arXiv:**2503.19276, 2024. https://arxiv.org/abs/2503.19276

[9]. Rahman, B. et al. **"Optimizing Plant Watering Efficiency via IoT: Fuzzy Sugeno Method with ESP8266 Microcontroller." TEM Journal,** 13(3), 1849–1857, 2024. https://www.ceeol.com/search/article-detail?id=1260391

[10]. Rahman, B. et al. **"Electrocardiogram Abnormal Detection Model Using Machine Learning Approach." ICIC Express Letters Part B**, 14(8), 779-786, 2023. http://www.icicelb.org/ellb/contents/2023/8/elb-14-08-01.pdf ;

https://scholar.ui.ac.id/en/publications/electrocardiogram-abnormal-detection-model-using-machine-learning

[11]. Rahman, B. et al. "**PPO-BR: Proximal Policy Optimization with Bias Rectification for Reinforcement Learning in Noisy Feedback Environments."** Version 2, **arXiv preprint**, May 2025. [arXiv:2505.17714v1], https://arxiv.org/abs/2505.17714

[12]. Rahman, B., "**HOT-FIT-BR: A Context-Aware Evaluation Framework for Digital Health Systems in Resource-Limited Settings**," *arXiv preprint arXiv:2505.20585*, 2025. [Online]. Available: https://arxiv.org/abs/2505.20585

Notable Contributions

Chairman of IKA DCS (2025–2028) – AI-driven alumni collaboration

Director of Innovation and Technology at APPRODI – Driving national tech-productivity ecosystem

Director of Research Development and Innovation at IAIS – Driving Lates Technology in Information Systems

Pioneer of PPO-BR and TATAP AI – RL Stability & Assistive AI for humanity

Author of 8+ peer-reviewed international publications (Q1–Q3)

Reviewer & Research Mentor – IEEE, Hibah Dikti, and AI books

Books and Training

Master Plan Produktivitas Nasional – 2025

R Programming for AI & Data Science – 2025

Book Chapter "Future Jakarta", Dikti 2024 **(IN)**

Bab. 6. Penerapan Iot Dalam Mengatasi Kemacetan Lalu Lintas Pada Putar Balik Jalan Raya
Surat-Peralihan-Hak-Penulis-Jilid-1-4.pdf

Book Chapter "The Convergence of Extended Reality and Metaverse in Agriculture", IGI 2025 **(EN)**

Ch. 5: Enhancing IoT-Based Smart Farming With Digital Twin and XR: A LoRaWAN-Powered System for Soil Monitoring and Automated Irrigation Control (200525-123142),
https://www.igi-global.com/book/convergence-extended-reality-metaverse-agriculture/369333

Book Chapter "Data Mining", Sonpedia, 2025

Bab 9. "Data Mining dalam Bidang Kesehatan dan Medis"

Book Chapter "Kecerdasan Artificial", Sonpedia, 2026

Bab 1. "Pengantar Kecerdasan Artificial"

100+ sessions in SQL Server, C#, .NET, AI, Smart System Development

Professional Impact Summary

With over **38 years** of cross-sector and international experience (**including roles in Singapore, Vietnam, and Russia**), I bridge the gap between cutting-edge AI innovation and real-world deployment, empowering inclusive communities, enhancing national productivity, and leading academic and industrial transformation in Indonesia.

Professional Certification & Trainning

- Certified Productivity Specialist (CPS), Asian Productivity Organization (APO).

Actively applies expertise in Computational Intelligence to workforce development, serving as an instructor in AI-driven productivity training for the private sector, including manufacturing, services, and industrial domains. Programs emphasize the practical use of ChatGPT and no-code Machine Learning platforms (drag-and-drop ML), enabling employees to adopt AI tools for efficiency and innovation. Also contributing to the integration of AI-based productivity modules into higher education curricula, bridging academic research in CI with real-world applications.

Keynote & Invited Speaking Engagements

Dr. Ben Rahman has been **actively invited as a keynote speaker in national and international events**, reflecting his leadership and influence in emerging technologies and AI.

- Keynote Speaker – **International Symposium on "Recent Trends on Emerging Technology 4.0"**, 22–23 November 2024, Dehradun, INDIA.
- (Delivered opening keynote on **Agentic AI and Productivity-Driven Innovation**)
- **Featured Speaker in numerous national** seminars, research bootcamps, and technology forums
- **Delivered talks** both in-person and virtually via platforms such as Zoom, Webex, and MS Teams, reaching diverse audiences across Indonesia, Southeast Asia, and beyond
- **Focus** areas include:
    - **Computational Intelligence in Computer Science**
    - **Agentic AI and LLM-based Systems**
    - **Digital Transformation for Inclusive Productivity**
    - **Building Research Legacy & Academic Impact in Global Stage**

- **PodCast – Productivty and Computational Intelligence**

His ability to communicate complex AI concepts in accessible, impactful ways has made him a sought-after speaker by universities, professional associations, and policy-oriented institutions.