CURRICULUM VITAE · 2026 EDITION

Dr. H. Benrahman

B.Sc., S.Kom., MMSI., CPS

Computational Intelligence scholar, technology leader, educator, and builder with more than 38 years of cross-sector experience bridging industry, academia, research, and real-world AI implementation.

Computational Intelligence | AI Optimization | Agentic AI & LLMs | AI for Society

benrahman.com

PROFESSIONAL IDENTITY

Profile

Ben Rahman earned his Bachelor's degree in 2012 and Master's degree in 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 developed extensive professional experience across multinational technology environments, holding engineering and leadership roles in several countries. Since 2018, he has served as a faculty member at Universitas Nasional, Indonesia.

His central expertise is Computational Intelligence, including machine learning, deep learning, hybrid intelligent systems, AI optimization, Medical AI, Agentic AI, and LLM-based systems. His research trajectory connects biomedical signal intelligence, business intelligence, and educational intelligence, with an emphasis on impactful and culturally grounded AI systems.

> *"Learning. Building. Sharing. Knowledge grows through harmony, not hierarchy."*

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LOCATION
Jakarta, Indonesia

WEBSITE
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CORE EXPERTISE
Computational Intelligence in Computer Science

38+	2018	2024	Q1-Q3
YEARS IN IT	FACULTY SINCE	PH.D. COMPLETED	INDEXED RESEARCH

FOUNDATION

Education & Experience

Educational Background

2024
Ph.D. in Computer Science
Universitas Bina Nusantara

2017
MMSI in Information Systems
Universitas Bina Nusantara

2012
S.Kom. in Information Systems
Universitas Bina Nusantara

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

2025
Certified Productivity Specialist (CPS)
Asian Productivity Organization

Professional Experience

1987-1992
Programmer & System Analyst
PT Semen Padang

1992-1996
IT Supervisor
Alcatel Cable

1996-1998
Head of IT Department
PT South Pacific Viscose

1998-2006
Assistant IT Manager
International SOS

2006-2018
ICT Manager
Medika Plaza

2024-2027
Director of Innovation and Technology
APPRODI

2025-2028
Chair, IKA-DCS
Bina Nusantara University

RESEARCH TRACK RECORD

Selected Publications

1. **Enhancing Spatial-Temporal Crime Forecasting Using Machine Learning for Law Enforcement** Q1 Scopus
   IEEE Access, 2026. DOI: 10.1109/ACCESS.2026.3706026.
2. **AI-based sagittal spinal posture assessment for adolescent screening in low-resource school settings** Q1 Scopus
   Scientific Reports, 2026. DOI: 10.1038/s41598-026-36634-8.
3. **IDChat: Toward a universal, multi-biometric digital identity for next-generation secure communication in ASEAN** Q1 Scopus
   IEEE Access, 2026. DOI: 10.1109/ACCESS.2025.3645071.
4. **Optimizing Customer Satisfaction Through Sentiment Analysis: A BERT-Based Machine Learning Approach to Extract Insights** Q1 Scopus
   IEEE Access, 2024. DOI: 10.1109/ACCESS.2024.3478835.
5. **Optimizing plant watering efficiency via IoT: Fuzzy Sugeno method with ESP8266 microcontroller** Q3 Scopus
   TEM Journal, 13(3), 1849-1857, 2024. DOI: 10.18421/TEM133-13.
6. **Detection of Student Sleepiness Using U-Net and Conv-LSTM Methods to Improve Learning Quality**
   ICTECA, 2023. DOI: 10.1109/ICTECA60133.2023.10490499.
7. **Development of an Image-Based Road Pothole Detection Model with U-Net Implementation**
   ICCED, 2023. DOI: 10.1109/ICCED60214.2023.10425723.
8. **Heart Disease Classification Model Using K-Nearest Neighbor Algorithm**
   ICIC, 2021. DOI: 10.1109/ICIC54025.2021.9632918.
9. **Context-Aware Semantic Segmentation: Enhancing Pixel-Level Understanding with Large Language Models**
   arXiv:2503.19276.
10. **Electrocardiogram Abnormal Detection Model Using Machine Learning Approach**
    ICIC Express Letters Part B, 14(8), 779-786, 2023. DOI: 10.24507/icicelb.14.08.779.
11. **PPO-BR: Proximal Policy Optimization with Bias Rectification for Reinforcement Learning in Noisy Feedback Environments**
    arXiv:2505.17714.
12. **HOT-FIT-BR: A Context-Aware Evaluation Framework for Digital Health Systems in Resource-Limited Settings**
    arXiv:2505.20585, 2025.

LEADERSHIP & KNOWLEDGE CONTRIBUTION

Impact, Books & Training

Academic Positions

2018-Present
Universitas Nasional
Lecturer

2014-Present
Universitas Bakrie
Lecturer

2017-2019
Politeknik Negeri Jakarta
Lecturer

2017-2019
Sekolah Tinggi Teknologi Jakarta
Lecturer

Notable Contributions

- Chairman of IKA-DCS (2025-2028), advancing AI-driven alumni collaboration.
- Director of Innovation and Technology at APPRODI.
- Director of Research Development and Innovation at IAIS.
- Pioneer of PPO-BR and TATAP AI.
- Reviewer and research mentor for IEEE, higher education grants, and AI books.

Books & Chapters

- Master Plan Produktivitas Nasional (2025).
- R Programming for AI & Data Science (2025).
- Future Jakarta - IoT for traffic congestion (2024).
- The Convergence of Extended Reality and Metaverse in Agriculture (IGI, 2025).
- Data Mining - health and medical applications (2025).
- Kecerdasan Artifisial - introductory chapter (2026).

Professional Certification & Training

Certified Productivity Specialist (CPS), Asian Productivity Organization. Applies Computational Intelligence to workforce development and AI-driven productivity training for manufacturing, services, industry, and higher education.

Professional Impact

Bridges advanced AI innovation and real-world deployment to strengthen inclusive communities, national productivity, and academic-industrial transformation in Indonesia.

PUBLIC ENGAGEMENT

Keynote & Invited Speaking

Dr. Ben Rahman is invited to national and international events for his work in emerging technologies, Artificial Intelligence, Computational Intelligence, and productivity-driven transformation.

22-23 NOVEMBER 2024 · DEHRADUN, INDIA
Keynote Speaker - International Symposium on Recent Trends on Emerging Technology 4.0
Opening keynote on Agentic AI and Productivity-Driven Innovation.

NATIONAL & INTERNATIONAL FORUMS
Featured Speaker and Research Mentor
Seminars, research bootcamps, professional associations, and policy-oriented institutions.

FOCUS AREAS
Computational Intelligence in Computer Science

SYSTEMS
Agentic AI and LLM-based Systems

TRANSFORMATION
Digital Transformation for Inclusive Productivity

ACADEMIC LEGACY
Building Research Legacy & Global Academic Impact

MEDIA
Podcast on Productivity and Computational Intelligence

Complex technology becomes meaningful when people can understand it, use it, and transform it into measurable impact.