

Kuncahyo Setyo Nugroho

AI Researcher – NVIDIA University Ambassador

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EDUCATION

Sepuluh Nopember Institute of Technology, Surabaya, Indonesia **Sep 2023 - Jan 2024**

Engineer (Ir.) in Informatics Engineering

Professional Engineer Program, School of Interdisciplinary Management and Technology

The Institution of Engineers Indonesia

Brawijaya University, Malang, Indonesia

Sep 2020 - Jan 2023

Master of Computer Science (M.Kom) in Intelligent System

Department of Informatics Engineering, Faculty of Computer Science

Research Intensification for Sustainable Education and Training (RISET) Scholarship Awardee

Intelligent System Laboratory and Affective Computing Research Interest Group

Master thesis: Contextual Language Representations Model for Emotion Detection in Indonesian Text Using Deep Bidirectional Transformers

Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

Jul - Aug 2019

Non-Degree in Artificial Intelligence

Department of Informatics, Faculty of Intelligent Electrical and Informatics Technology

Fresh Graduate Academy Digital Talent Scholarship Awardee

Ministry of Communication and Information Technology, Indonesia

Final project: SMS Text Classification using Different Machine Learning Approach into Promo, Fraud, and Normal Message

Widya Gama University, Malang, Indonesia

Oct 2013 - Jan 2019

Bachelor of Computer Science (S.Kom) in Software Engineering

Department of Informatics Engineering, Faculty of Engineering

Bachelor thesis: Design and Development of a Complaint Text Classification System for "Sambat" Online Based on Naive Bayes Classifier

EXPERIENCE

Artificial Intelligence Researcher

Nov 2023 - Present

Bioinformatics and Data Science Research Center, BINUS University, West Jakarta, Indonesia

- 1 Conducting research (mostly in AI fields, especially in machine learning and deep learning)
- 2 Managing, maintaining and installing servers of Artificial Intelligence Research and Development Center (AIRDC) for model training, application deployment, and data storage purpose
- 3 Collaboration with internal and external BINUS to conduct studies, primarily regarding applications of machine learning and deep learning in different sectors

Academic Coordinator of Artificial Intelligence

Jan 2022 - Oct 2023

PT. Orbit Ventura Indonesia (Orbit Future Academy), South Jakarta, Indonesia

- 1 Responsible for teaching artificial intelligence, deep learning, and machine learning to undergraduate students (around 1300 students)
- 2 Developing additional course content, instructional material, and assessments
- 3 Designing and implementing learning strategies
- 4 Developing a learning curriculum, including learning outcomes and semester learning plans
- 5 Evaluating course learning outcomes
- 6 Coordinate with the university regarding the student's learning process

Lecturer Assistant

Jan 2021 - Jan 2023

Faculty of Engineering, Widya Gama University, Malang, Indonesia

- 1 Responsible for teaching database systems, decision support systems, data structures and algorithms, system analysis and design to undergraduate students (around 25 students)

Laboratory Assistant of Advanced Machine Learning

Feb - Jul 2021

Faculty of Computer Science, Brawijaya University, Malang, Indonesia

- 1 Responsible for teaching machine learning to undergraduate students (around 50 students)
- 2 Assist the students in programming using Python and solve errors while programming
- 3 Examine the given tasks of the undergraduate students

Software Engineer

May 2018 – May 2021

ITC and Data Center, Widya Gama University, Malang, Indonesia

- 1 Assisting the development head of the division with all aspects of software design and coding
- 2 Gathering information from users about program functionality
- 3 Attending and contributing to development meetings
- 4 Writing and maintaining code
- 5 Writing reports to a head of the division
- 6 Working on minor bug fixes

MEMBERSHIPS

- 1 Ikatan Ahli Informatika Indonesia (IAII)
- 2 Persatuan Insinyur Indonesia (PII)

COURSES TAKEN & CERTIFICATIONS

- 1 DeepLearning.AI TensorFlow Developer Specialization. Issued by Coursera on Mar 2024.
- 2 Fundamentals of Accelerated Data Science. Issued by NVIDIA Deep Learning Institute on Feb 2024.
- 3 TensorFlow: Advanced Techniques Specialization. Issued by Coursera on Dec 2023.
- 4 TensorFlow: Data and Deployment Specialization. Issued by Coursera on Dec 2023.
- 5 Mathematics for Machine Learning and Data Science Specialization. Issued by Coursera on Nov 2023.
- 6 Fundamentals of Deep Learning. Issued by NVIDIA Deep Learning Institute on Oct 2023.
- 7 Machine Learning Engineering for Production (MLOps) Specialization. Issued by Coursera on Oct 2023.
- 8 Generative Adversarial Networks (GANs) Specialization. Issued by Coursera on Oct 2023.
- 9 Deep Learning Specialization. Issued by Coursera on Oct 2023.
- 10 Natural Language Processing Specialization. Issued by Coursera on Sep 2023.
- 11 Machine Learning Specialization. Issued by Coursera on Sep 2023.
- 12 MCE: Microsoft Certified Educator. Issued by Microsoft on Sep 2022.
- 13 IC3 (Internet and Computing Core Certification) Digital Literacy. Issued by Certiport on Apr 2018.
- 14 Oracle Database Design and Programming with SQL. Issued on Nov 2016.

AWARDS

- 1 Best Paper, 6th International Conference on Sustainable Information Engineering and Technology, 2021.
- 2 Best Presenter, 4th Conference on Innovation and Application of Science and Technology, 2021.
- 3 Research Intensification for Sustainable Education and Training (RISET) Scholarship, Brawijaya University, 2020.

PROJECTS

- 1 E-learning Integrated Expert System Using Fuzzy Inference for Disease Consultation. Nov 17, 2022. Intellectual Property Number: EC00202290167.
- 2 E-Learning Expert System (ELREST). Sep 28, 2022. Intellectual Property Number: EC00202269396.
- 3 Indonesia's Leading Rabbit Farming Information System. Nov 17, 2021. Intellectual Property Number: EC00202165741.
- 4 Integration of the Disease Consultation Expert System with the Medical Record System. Nov 15, 2021. Intellectual Property Number: EC00202164491.
- 5 Electronic Medical Record Expert System (EMREST). Nov 15, 2021. Intellectual Property Number: EC00202164510.

JOURNAL & CONFERENCE/SYMPOSIUM PAPERS

- 1 E. S. Hermawan, G. N. Elwirehardja, K. S. Nugroho, and B. Pardamean, "Gradient Boosted CRCNet Pipeline for Indonesia Colorectal Cancer Genotype Selection," *ICIC Express Letters*, 2024. [Accepted].
- 2 G. A. Tarigan, G. N. Elwirehardja, K. S. Nugroho, and B. Pardamean, "Lighter Student Engagement Recognition in a Classroom Environment Using Skeletal Keypoints," *IAENG International Journal of Computer Science*, 2024. [Accepted].
- 3 J. S. Sulistyawan, K. Julian, G. N. Elwirehardja, K. S. Nugroho, and B. Pardamean, "A Two-step Feature Selection Approach for Identifying SNPs Associated with Colorectal Cancer," *Communications in Mathematical Biology and Neuroscience (CMBN)*, 2024. <https://scik.org/index.php/cmbn/article/view/8468>.
- 4 F. A. Bachtiar, A. D. Fauzulhaq, M. T. R. Manullang, F. R. Pontoh, K. S. Nugroho, and N. Yudistira, "A Generative-Based Chatbot for Daily Conversation: A Preliminary Study", *SIET '22: 7th International Conference on Sustainable Information Engineering and Technology*, pp. 8-12, 2022, doi: 10.1145/3568231.3568234.
- 5 K. S. Nugroho, F. A. Bachtiar, and W. F. Mahmudy, "Detecting Emotion in Indonesian Tweets: A Term-Weighting Scheme Study", *Journal of Information Systems Engineering and Business Intelligence*, vol. 8, no. 1, pp. 61-70, 2022, doi: 10.20473/jisebi.8.1.61-70.
- 6 Istiadi, E. B. Sulistiarini, R. Joegijantoro, A. N. Suksmawati, K. S. Nugroho, and I. Akbar, "Expert System Integrated with Medical Record for Infectious Diseases using Certainty Factor", *2022 IEEE International Conference on Cybernetics and Computational Intelligence*, pp. 451-456, 2022, doi: 10.1109/CyberneticsCom55287.2022.9865639.
- 7 Istiadi, E. B. Sulistiarini, R. Joegijantoro, A. N. Suksmawati, K. S. Nugroho, and I. Akbar, "An Integrated E-Learning Fuzzy Expert System for Acute Pharyngitis Diagnosis", *The 6th International Conference on Information Technology, Information Systems and Electrical Engineering*, pp. 1-6, 2022, doi: 10.1109/ICI-TISEE57756.2022.10057861.
- 8 K. S. Nugroho, A. Y. Sukmadewa, A. Vidiyanto, and W. F. Mahmudy, "Effective Predictive Modelling for Coronary Artery Diseases using Support Vector Machine," *IAES International Journal of Artificial Intelligence (IJ-AI)*, vol. 11, no. 1, pp. 345-355, 2022, doi: 10.11591/ijai.v11.i1.pp345-355.
- 9 K. S. Nugroho and F. A. Bachtiar, "Text-Based Emotion Recognition in Indonesian Tweet using BERT," in *The 4th International Seminar on Research of Information Technology and Intelligent Systems*, 2021, doi: 10.1109/ISRITI54043.2021.9702838.
- 10 K. S. Nugroho, I. Akbar, A. N. Suksmawati, and I. Istiadi, "Deteksi Depresi dan Kecemasan Pengguna Twitter Menggunakan Bidirectional LSTM," in *The 4th Conference on Innovation and Application of Science and Technology*, pp. 287-296, 2021.
- 11 S. W. Iriananda, R. P. Putra, and K. S. Nugroho, "Analisis Sentimen dan Analisis Data Eksploratif Ulasan Aplikasi Marketplace Google Playstore," in *The 4th Conference on Innovation and Application of Science and Technology*, pp. 287-296, 2021.
- 12 K. S. Nugroho, A. Y. Sukmadewa, H. Wuswilahaken DW, F. A. Bachtiar, and N. Yudistira, "BERT Fine-Tuning for Sentiment Analysis on Indonesian Mobile Apps Reviews," in *SIET '21: 6th International Conference on Sustainable Information Engineering and Technology*, pp. 258-264, 2021, doi: 10.1145/3479645.3479679.
- 13 K. S. Nugroho, A. Y. Sukmadewa, and N. Yudistira, "Large-Scale News Classification using BERT Language Model: Spark NLP Approach", *SIET '21: 6th International Conference on Sustainable Information Engineering and Technology*, pp. 240-246, 2021, doi: 10.1145/3479645.3479658.
- 14 K. S. Nugroho, I. Istiadi, and F. Marisa, "Naive Bayes Classifier Optimization for Text Classification on E-government using Particle Swarm Optimization," *Jurnal Teknologi dan Sistem Komputer*, vol. 8, no. 1, pp. 21-26, 2020, doi: 10.14710/jtsiskom.8.1.2020.21-26.

BOOK CHAPTERS

- 1 K. S. Nugroho and F. A. Bachtiar, "Komputasi Afektif: Kemampuan Komputer untuk Mengenali Emosi Manusia," in *Book Chapter Seri 1 - Inovasi Teknologi Dalam Digitalisasi Industri*, Inteligencia Media, vol. 1, pp. 189-203, 2021.
- 2 S. W. Iriananda and K. S. Nugroho, "Mengukur Kemiripan Teks Pada Layanan Pengaduan Masyarakat Online," in *Book Chapter Seri 1 - Inovasi Teknologi Dalam Digitalisasi Industri*, Inteligencia Media, vol. 1, pp. 125-138, 2021.
- 2 K. S. Nugroho and I. Istiadi, "E-Government Cerdas Berbasis Machine Learning: Peningkatan Kualitas Pelayanan Masyarakat di Indonesia," in *Book Chapter Seri 1 - Inovasi Teknologi Dalam Digitalisasi Industri*, Inteligencia Media, vol. 1, pp. 83-95, 2021.

INVITED TALKS

- 1 Maximize Society 5.0 with Artificial Intelligence, *Technowars 10 Universitas PGRI Kanjuruhan Malang*, Nov 2022.
- 2 Natural Language Processing Real-World Implementations, *Seminar Technology Universitas PGRI Kanjuruhan Malang*, Jul 2022.
- 3 What Makes BERT Special? A Study on Emotion Detection in Text, *Python Conference Indonesia*, Dec 2021.
- 4 Text Preprocessing Pipeline for Bahasa using Python: Concept, Steps, Tools, and Examples, *Python Conference Indonesia*, Nov 2020.
- 5 Automating E-Government Services with Artificial Intelligence: Extensive use of Machine Learning, *Webinar of E-Government Transformation Toward Smart System*, Mar 2020.

INVITED TRAINING & UPSKILLING

- 1 Fundamentals of Deep Learning and Fundamentals of Accelerated Data Science with RAPIDS, *NVIDIA Deep Learning Institute in partnership with BDSRC & AIRDC BINUS University and Data Science Club BINUS University*, Feb 2024.
- 2 Pelatihan Pembuatan Website Usaha untuk Optimalisasi Penjualan Keripik Kedelai, *Universitas PGRI Adi Buana Surabaya*, Dec 2023.
- 3 Bimbingan Teknis Operator Komputer, *Dinas Perhubungan Kabupaten Malang, Sanaya Resort Malang*, Mar 2021.

ACADEMIC TEACHING

- 1 TIF310 Information Systems Analysis & Design (3rd semester, 3 Credits)
- 2 TIF205 Database (2nd semester, 3 Credits).
- 3 TFB708 Decision Support System (7th semester, 3 Credits).
- 4 TIF206 Data Structure & Algorithms (2nd semester, 3 Credits).
- 5 TET607 Information System & Database (6th semester, 3 Credits).

MENTORING

- 1 Python Pro Course (Junior High School) @Kodland Indonesia. 2024.
- 2 Software Engineering for Kampus Merdeka (Undergraduate) @RevoU. Batch 6, 2024.
- 3 Artificial Intelligence Mastery Program for Kampus Merdeka (Undergraduate) @Orbit Future Academy. Batch 2, 2022 - Batch 5,2023.