



DR. KOKOY SITI KOMARIAH, S.KOM., M.T., M.ENG.

Bandung, Jawa Barat, Indonesia 🏠

kokoy.sitikomariah@gmail.com ✉

kokoy.sitikomariah@gmail.com ✉

Kokoy Siti Komariah 🌐



AFFILIATION

Natural Language Processing (NLP) Research Group (KR NLP), Research Center for Data and Information Sciences (PR SDI), Research Organization for Electronics and Informatics (OREI)

The National Research and Innovation Agency (BRIN)



EDUCATION

Doctor of Engineering | Artificial Intelligence Convergence, Pukyong National University (PKNU), South Korea

FEBRUARY 2019 – FEBRUARY 2023

PKNU Graduate Student Scholarships dan Brain Korea 21 Program Scholarship

Master of Science | Electrical Engineering (Sub-Program Media and Game Technology), Institut Teknologi Bandung (ITB), Indonesia

SEPTEMBER 2013 – JULY 2016

Unggulan Scholarship from Ministry of Education and Culture of Republic Indonesia

Master of Engineering | Information System, Pukyong National University, Korea Selatan (Double Degree with ITB)

FEBRUARY 2015 – FEBRUARY 2016

Unggulan Scholarship from Ministry of Education and Culture of Republic Indonesia

Bachelor Degree | Computer Science, Universitas Pendidikan Indonesia (UPI), Indonesia

SEPTEMBER 2006 – APRYL 2011



WORK EXPERIENCES

IT System Development Manager | Indonesia Cyber Education Institute (ICE Institute), Tangerang, Indonesia

MARCH 2023 – FEBRUARY 2024

- **Strategic Planning and Project Management:** Developing system development strategies aligned with business objectives and managing projects from start to finish, including budgeting and scheduling.

- **Team Coordination and Quality Monitoring:** Overseeing the development team, ensuring code and system quality through testing, and maintaining the implementation of best software development practices.
- **System Design and Vendor Management:** Designing efficient system architecture, collaborating with vendors for technology procurement, and ensuring that the technologies used meet the company's needs.
- **Risk Management and Security Compliance:** Identifying and managing development risks, as well as ensuring that all systems comply with data security standards and applicable regulations.

Research Assistant | Pukyong National University, Busan, South Korea

FEBRUARY 2019 – FEBRUARY 2023

- Conducting research on machine learning, particularly related to natural language processing (NLP) and text processing.
- Successfully published 10 scientific works, including 3 international journals, 1 national journal, and 6 conference proceedings.
- Participated in various international activities such as the Meeting of Asia & Pacific Women in Science and Technology (MAPWiST), Young Women Scientist (YWS) Camp, and has been a permanent member of The Association of Korean Women Scientists and Engineers (KWSE) since 2015.

Researcher | Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan

SEPTEMBER 2017 – AGUST 2018

Conducting research in the field of artificial intelligence, particularly related to natural language processing (NLP) and text processing in the Sensing Information Technology Division, Information and Communication Research Lab (ICL) Department.

Research Assistant | National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan

SEPTEMBER 2017 – AGUST 2018

- Joined the NTUST-ITRI research program in Taiwan. Worked as a researcher and pursued a doctoral program at NTUST in the Signal Processing and Communication Lab, Department of Electronic and Computer Engineering (ECE).
- Conducted research on deep learning methods for video processing and the application of natural language processing.



RESEARCH INTEREST

- Academic Research
- Machine learning
- Data Analysis and Visualization
- Natural Language Processing (NLP)
- Deep Learning
- Information Retrieval
- Food Computing
- Text Processing



LANGUAGE PROFICIENCY

- Bahasa Indonesia (Native)
- English (Professional level)



PUBLICATIONS

- 1) Rainer Timothy, Kokoy Siti Komariah, and Dani Suandi, "Comparative Analysis of Machine Learning Models for Early Diabetes Prediction based on Imbalance Data Handling Techniques", in Proceeding of 2026 8th International Symposium on Computational and Business Intelligence (ISCBI) 2026, Bali, Indonesia. Accepted in January 2026.
- 2) Kokoy Siti Komariah, Ariana Tulus Purnomo, Ding-Bing Lin, Dian Nurdiana, Bong-Kee Sin, "Non-Invasive Asthma Detection with FMCW Radar: An Imbalanced Learning Approach", in Proceeding of 12th International Conference on Computer, Control, Informatics and its Applications (IC3INA) 2025, Bandung, Indonesia. Published in January 2026.
- 3) Andi Djalal Latief, Yuyun, M. Teduh Uliniansyah, Elvira Nurfadhilah, Kokoy Siti Komariah, Dian Isnaeni Nurul Afra, Gunarso, Tri Sampurno, Nurfaedah Jufri, Gusnawaty, Ita Rosvita, Mutahharah Nemin Kaharuddin, Abdul Muis, and Hazriani, "Enhancing Bugis Language POS Tagging Using Recurrent Neural Networks and Semi-Supervised Self-Training", in Proceeding of 11th International Conference on Computer, Control, Informatics and its Applications (IC3INA) 2024, Bandung, Indonesia. Published in December 2024.
- 4) Ariana Tulus Purnomo, Kokoy Siti Komariah, Ding-Bing Lin, Willy Fitria Hendria, Bong-Kee Sin, and Nur Ahmadi, "Breathing Behavior Detection using Boosting Algorithm for Imbalance Dataset Collected with FMCW Radar", Hindawi Journal of Electrical and Computer Engineering, (SCIE), Under Review. (Note: Ariana Tulus Purnomo and Kokoy Siti Komariah contributed equally to this work).
- 5) Kokoy Siti Komariah, Ariana Tulus Purnomo, and Bong-Kee Sin, "SMPT: A Semi-Supervised Multi-Model Prediction Technique for Food Ingredient Named Entity Recognition (FINER) Dataset Construction", MDPI Journal of Informatics, (ESCI and Scopus), Published on 13 January 2023.
- 6) Kokoy Siti Komariah and Bong-Kee Sin, "Enhancing Food Ingredient Named-Entity Recognition with Recurrent Network-based Ensemble (ERN) Model", MDPI Journal of Applied Science, (ESCI and Scopus), Published on 13 October 2022.
- 7) Ariana Tulus Purnomo, Kokoy Siti Komariah, Ding-Bing Lin, Willy Fitria Hendria, Bong-Kee Sin, and Nur Ahmadi, "Non-contact Supervision of COVID-19 Breathing Behaviour with FMCW Radar and Stacked Ensemble Learning Model in Real-Time", IEEE Transactions on Biomedical Circuits and Systems, (SCI), Published on 19 July 2022. (Note: Ariana Tulus Purnomo and Kokoy Siti Komariah contributed equally to this work).
- 8) Yudi Widhiyasana, Masevli Harika, Fahmi Faturahman Nul Hakim, Fitri Diana, Kokoy Siti Komariah, and Diena Rauda Ramdania, "Genetic Algorithm for Artificial Neural Networks in Real-Time Strategy Games", Internasional Journal on Informatics Visualization, Published Juni 2022.
- 9) Kokoy Siti Komariah and Bong-Kee Sin, "BERT Pre-trained Models for Data Augmentation in Twitter Medical Named-Entity Recognition", in Korea Computer Congress (KCC) 2021, Jeju, Rep. of Korea.
- 10) Kokoy Siti Komariah and Bong-Kee Sin, "Medical Entity Recognition in Twitter using Conditional Random Fields", in International Conference on Electronics, Information, and Communication (ICEIC) 2021, Jeju, Rep. of Korea.
- 11) Kokoy Siti Komariah and Bong-Kee Sin, "Nutrition-based Food Recommendation System for Prediabetic Person", in Korean Software Congress (KCC) 2020, Pyongchang, Rep. of Korea.
- 12) Kokoy Siti Komariah, Woo-Hee Yang, and Bong-Kee Sin, "Achoed-LDA: Topic Modeling with Word Representation for Medical Discourse on Twitter", in Ubiquitous Computing and Web Information Technology (UCWIT) 2019, Andong, Rep. of Korea.

- 13) Sandi Rahmadika, Kokoy Siti Komariah, Kyeongmo Lee, and Kyung-Hyune Rhee, "Collaborative Federated Learning with Blockchain", in the 4th International Symposium on Mobile Internet Security (MobiSec 2019), Taichung, Taiwan.
- 14) Kokoy Siti Komariah and Bong-Kee Sin, "Health State Modeling and Prediction based on Hidden Markov Models", in 2019 11th International Conference on Ubiquitous and Future Networks (ICUFN), Zagreb, Kroasia.
- 15) Kokoy Siti Komariah, Carmadi Machbub, and Bong-Kee Sin, "A Study on Efficient Market Hypothesis to Predict Exchange Rate Trends Using Sentiment Analysis of Twitter Data", in Journal of Korea Multimedia Society, Published on July 2016.
- 16) Kokoy Siti Komariah and Bong-Kee Sin, "Hidden Markov Model Based Approach to USD Dollar/IDR Rupiah Currency Exchange Rate Prediction using Twitter Sentiment Analysis", Winter Conference of International Conference of Korean Institute of Information Scientists and Engineers (KIISE), December 2015, Pyeongchang, Rep. of Korea.
- 17) Kokoy Siti Komariah, Carmadi Machbub, and Bong-Kee Sin, "Efficient Market Hypothesis Approach to Predict USD/IDR Trends using Twitter Sentiment Analysis", in Fall Conference of Korean Multimedia Society Conference (KMMS), October 2015, Daegu, Rep. of Korea.
- 18) Kokoy Siti Komariah and Bong-Kee Sin, "Naïve Bayes Approach for Predicting Foreign Exchange Rate Fluctuation Based on Twitter Sentiment Analysis", in Spring Conference of Korean Multimedia Society Conference (KMMS), May 2015, Andong, Rep. of Korea.



BOOKS

- 1) Mohammad Teduh Uliniansyah, Ambar Yoganingrum, Agung Santosa, Andi Djalal Latief, Dian Isnaeni Nurul Afra, Kokoy Siti Komariah, Nimas Ayu Untariyati, Siska PS Pebiana, Yuyun Wabula. 2026. *"The Role of AI in Language Preservation: Revitalizing Endangered Languages Through Technology"*, AI-Powered Solutions for Bilingual Proficiency and Communication (p. 377-434). IGI Global Scientific Publishing.
- 2) Nuraisa Novia Hidayati, Agung Santosa, Elvira Nurfadhilah, Andi Djalal Latief, Kokoy Siti Komariah, Asril Jarin, Siska Pebiana, Yuyun Wabula, Radhiyatul Fajri, Tri Sampurno. 2026. *"Maintaining Academic Integrity in the Era of Large Language Models: A Guideline for Responsible Prompt Engineering"*. Advanced AI and Prompt Engineering Techniques and Resources (p. 121-170). IGI Global Scientific Publishing.
- 3) Elvira Nurfadhilah, Ambar Yoganingrum, Andi Djalal Latief, Armita Widyasuri, Asril Jarin, Dian Isnaeni Nurul Afra, Gunarso Gunarso, Kokoy Siti Komariah, Mohammad Teduh Uliniansyah, Nimas Ayu Untariyati, Nuraisa Novia Hidayati, Radhiyatul Fajri, Retno Anggreini Dyah Ayuningtias, Siska Pebiana, Yaniasih Yaniasih, Yuyun Yuyun, Hayuning Titi Karsanti, Gita Citra Puspita. 2025. *"Artificial intelligence technologies in mental health: Transforming depression care through innovation"*. Humanizing Technology with Emotional Intelligence (p.219-262). IGI Global Scientific Publishing.
- 4) Citra Kurniawan, Widya Rizky Pratiwi, Sri Dewi Nirmala, Henry Praherdhiono, Siti Juliaha, Afriani, Kokoy Siti Komariah, Aryo Pinandito, Slamet Arifin. 2024. *"Inovasi Asesmen Pendidikan: Implementasi Decision Support System (DSS) Berbasis Video untuk Pembelajaran Mandiri"*. Malang: Seribu Bintang.



INTELLECTUAL PROPERTY RIGHTS

No.	Title	Year
1.	SMART BRIN: Sistem Informasi Pengelolaan dan Monitoring Kinerja Penelitian	2026

2.	HortiHeat Tracker 2.0	2026
3.	SISTEM CHATBOT RESPONSIF PENILAIAN CERDAS MAKAN BERGIZI GRATIS (WA BOT AI MBG) BERBASIS NODE.JS DAN MULTI-MODEL AI	2026
4.	Sistem Monitoring dan Evaluasi Nasional Menu Makan Bergizi Gratis (AI MBG) Berbasis Web dengan Integrasi Multi-Model AI	2026
5.	LIKOE - A Simple Liquefaction Analysis Tool	2025
6.	IndoCia6K – Dataset Corpus Paralel Bahasa Indonesia dan Bahasa Cia-Cia	2024



RESEARCH ACTIVITIES

No.	Research Title	Year
1.	Penguatan Tata Kelola Riset Berbasis Teknologi AI: Pengembangan Platform SMART-BRIN untuk Monitoring Kinerja Peneliti yang Terintegrasi dan Akuntabel	2026
2.	Sistem Penilaian Cerdas Menu Makan Bergizi Gratis: Analisis Citra, Estimasi Nutrisi, dan Validasi Kelayakan Berbasis Big Data dan Machine Learning	2026
3.	Bioprospeksi Genom Bakteri Asli Indonesia Koleksi INACC sebagai Penghasil ProdukAlami Bernilai Tinggi menggunakan TeknikBioinformatika dan Biologi Komputasi	2025
4.	Solusi Ekologis untuk Jaga Udara Kota (SEJUK) Optimalisasi dan Promosi Implementasi Nature-based Solutions (NbS) untuk Mengurangi Dampak Perubahan Iklim	2025
5.	Pengembangan PrediaBeat: Sistem Rekomendasi Personal Berbasis Chatbot sebagai Pendamping Nutrisi untuk Penderita Prediabetes	2026