



UNIVERSITAS INDONESIA

Faculty of Mathematics and Natural Sciences

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STAFF HANDBOOK

Name	Dr. rer. nat. Hendri Murfi		
Expertise	Machine Learning with applications in Topic Detection, Sentiment Analysis, Recommender System and Insurance.		
Academic career		Institution	Year
	Undergraduate degree	Universitas Indonesia	1991 – 1996
	Master degree	Universitas Indonesia	2002 – 2004
	Doctoral degree	TU Berlin	2006 – 2010
	Post-doctoral	-	-
Employment	Position	Employer	Period
	Lecturer	Universitas Indonesia	1998 – 2002
	Assistant Professor	Universitas Indonesia	2002 – 2017
	Associate Professor	Universitas Indonesia	2017 - Now
Research and development projects over the last 5 years	<ol style="list-style-type: none"> 1. Riset Penelitian Dasar Unggulan Perguruan Tinggi - Dikti, "Pengembangan Metode Pendeteksian Topik Berbasis Fuzzy Clustering dengan Menggunakan Deep Learning dan Lifelong Learning", Period 2021-2023, Partner Arie Wibowo (member) and Nora Hariadi (member), Amount of financing Rp 300.000.000 2. Riset Penelitian Dasar Unggulan Perguruan Tinggi - Dikti, "Pengembangan Metode Ekstraksi Topik Berbasis Clustering untuk Penginderaan Topik Sedang Tren pada Media Sosial", Period 2018-2020, Partner Al Haji Akbar Bachtiar (member) and Siti Nurrohmah (member), Amount of financing Rp 270.000.000 3. Riset Penelitian Terapan Unggulan Perguruan Tinggi - Dikti, "Topic Modeling dengan Probable Guarantees untuk Pendeteksian dan Analisis Tren Topik pada Twitter", Period 2016-2017, Partner Al Haji Akbar Bachtiar (member) and Arie Wibowo (member), Amount of financing Rp 180.000.000 4. Riset PUTI Prosiding – Universitas Indonesia, "Pengembangan dan Analisis Metode Machine Learning XGBoost untuk Industri Asuransi", Period 2020, Partner -, Amount of financing Rp 24.000.000 5. Riset PIT 9 – Universitas Indonesia, "Pengembangan dan Analisis Metode Machine Learning untuk Big Data – Studi Kasus Internet dan Industri Asuransi", Period 2019, 		

	<p>Partner -, Amount of financing Rp 270.000.000</p> <p>6. Riset PITTA – Universitas Indonesia, “Pengembangan dan Analisis Metode Machine Learning pada Industri Asuransi”, Period 2018, Partner Maulana Malik (member), Amount of financing Rp 81.000.000</p> <p>7. Riset PITTA – Universitas Indonesia, “Pengembangan dan Analisis Metode Machine Learning untuk Prediksi Tingkat Mortalitas”, Period 2018, Partner Yudi Satria (member), Amount of financing Rp 81.000.000</p> <p>8. Riset PITTA – Universitas Indonesia, “Pengembangan Pemodelan Topik Berbasis Metode Separable Nonnegative Matrix Factorization dan Fuzzy C-Means”, Period 2017, Partner Arie Wibowo (member), Amount of financing Rp 75.000.000</p>								
Industry collaborations over the last 5 years	<ol style="list-style-type: none"> 1. Project title : AI Consulting and Training Services Partners : PT MP Games (Berita Online BaBe) 2. Project title : AI Training Services Partners : PT Indonesia Power 3. Project title : Machine Learning and Deep Learning Training Services Partners : Center for Sustainable Infrastructure Development 4. Project title : Sosialisasi Bidang Ilmu Aktuaria Partners : Risk Management, Economic Sustainability and Development in Indonesia (READI) 								
Patents and proprietary rights	<table border="1"> <thead> <tr> <th>Title</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>1. Yusdiansyah M.R., Murfi H., Wibowo A. Randomspace-Based Fuzzy C-Means for Topic Detection on Indonesia Online News. In: Chamchong R., Wong K. (eds) Multi-disciplinary Trends in Artificial Intelligence. Lecture Notes in Computer Science, vol 11909. Springer, Cham</td> <td>2019</td> </tr> <tr> <td>2. Saputro A. R., Murfi H., Nurrohmah S. Analysis of Deep Neural Networks for Automobile Insurance Claim Prediction. In: Tan Y., Shi Y. (eds) Data Mining and Big Data. Communications in Computer and Information Science, vol 1071. Springer, Singapore</td> <td>2019</td> </tr> <tr> <td>3. Salma D.F., Murfi H., Sarwinda D. The Performance of One-Dimensional Naïve Bayes Classifier for Feature Selection in Predicting Prospective Car Insurance Buyers. In: Tan Y., Shi Y. (eds) Data Mining and Big Data. Communications in Computer and Information Science, vol 1071. Springer, Singapore.</td> <td>2019</td> </tr> </tbody> </table>	Title	Year	1. Yusdiansyah M.R., Murfi H. , Wibowo A. Randomspace-Based Fuzzy C-Means for Topic Detection on Indonesia Online News. In: Chamchong R., Wong K. (eds) Multi-disciplinary Trends in Artificial Intelligence. Lecture Notes in Computer Science, vol 11909. Springer, Cham	2019	2. Saputro A. R., Murfi H. , Nurrohmah S. Analysis of Deep Neural Networks for Automobile Insurance Claim Prediction. In: Tan Y., Shi Y. (eds) Data Mining and Big Data. Communications in Computer and Information Science, vol 1071. Springer, Singapore	2019	3. Salma D.F., Murfi H. , Sarwinda D. The Performance of One-Dimensional Naïve Bayes Classifier for Feature Selection in Predicting Prospective Car Insurance Buyers. In: Tan Y., Shi Y. (eds) Data Mining and Big Data. Communications in Computer and Information Science, vol 1071. Springer, Singapore.	2019
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	4. Murfi H. The Accuracy of Fuzzy C-Means in Lower-Dimensional Space for Topic Detection. In: Qiu M. (eds) Smart Computing and Communication. Lecture Notes in Computer Science, vol 11344. Springer, Cham	2018
Important publications over the last 5 years	<p style="text-align: center;">Selected recent publications</p> <ol style="list-style-type: none"> 1. Murfi. H. (2021) A Scalable Eigenspace-Based Fuzzy C-Means for Topic Detection. Data Technologies and Applications (in Press) 2. Parlina, A., Ramli, K., Murfi, H. (2021) Exposing Emerging Trends in Smart Sustainable City Research Using Deep Autoencoders-Based Fuzzy C-Means. Sustainability, 13(5), 2876 3. Parlina A, Ramli K, Murfi H. (2020) Theme Mapping and Bibliometrics Analysis of One Decade of Big Data Research in the Scopus Database. Information, 11(2), 69 4. Tjahjadi, H., Ramli, K., & Murfi, H. (2020). Noninvasive Classification of Blood Pressure Based on Photoplethysmography Signals Using Bidirectional Long Short-Term Memory and Time-Frequency Analysis. IEEE Access, 8, 20735-20748 5. Rusdah, D.A., Murfi, H. (2020) XGBoost in Handling Missing Values for Life Insurance Risk Prediction. SN Applied Science, 2(1336) 6. Murfi, H., Siagian, F. L., & Satria, Y. (2019). Topic Features for Machine Learning-Based Sentiment Analysis in Indonesian Tweets. International Journal of Intelligent Computing and Cybernetics, 12(1), 70-81. 7. Wahyudi, B., Ramli, K., & Murfi, H. (2018). Implementation and Analysis of Combined Machine Learning Method for Intrusion Detection System. International Journal of Communication Networks and Information Security, 10(2), 295-304 8. Alatas, H., Murfi, H., Bustamam, A. (2018) Topic Detection Using Fuzzy C-Means with Nonnegative Double Singular Value Decomposition Initialization. International Journal of Advances in Soft Computing and its Applications, 10(2), 206-222 9. Fauzan, M. A., Murfi, H. (2018) The Accuracy of XGBoost for Insurance Claim Prediction. International Journal of Advances in Soft Computing and its Applications, 10(2), 159-171 10. Sitorus, A. P., Murfi, H., Nurrohmah, S., & Akbar, A. (2017). Sensing Trending Topics in Twitter for Greater Jakarta Area. International Journal of Electrical and Computer Engineering, 7(1), 330-336. 	
Scholar UI ID	https://scholar.ui.ac.id/en/persons/hendri-murfi	
Activities in specialist bodies over the last 5 years	Organization	Role
	The Indonesian Mathematical Society	Member
	Association for Computing Machinery	Member
		Period
		2016 – Now
		2010 - Now