

Staff Handbook

Name	Danang Ariyanto, S.Si., M.Si.				
Position	Assistant Professor in Applied Statistics				
Academic Career	Academic Appointment		Institution		Year
	Undergraduate		Universitas Brawijaya		2009 – 2013
	Master		Universitas Brawijaya		2013 – 2017
	Lecturer		Universitas Negeri Surabaya		2022 – present
Employment	No	Position	Employer		Period
	1	Lecturer, Department of Mathematics	Universitas Negeri Surabaya		2022 – present
Research and development projects over the last 5 years	No	Name of project	Period	Partners	Amount of Financing
	1	Stock Price Prediction and Simulation Using Geometric Brownian Motion-Kalman Filter (GBM-KF)	2023	UNESA (non-state budget)	IDR 20.000
	2	Flood Area Segmentation in Drone (Unmanned Aerial Vehicle) Videos Using U-Net	2023	UNESA (non-state budget)	IDR 17.000
	3	Mapping of Extreme Rainfall in Indonesia for Forecasting Flood and Drought Disasters Using Extreme Value Clustering	2023	UNESA (non-state budget)	IDR 25.000
	4	Integration of Bivariate Logistic Regression and Decision Tree Models for Initial Screening of Hypertension and Diabetes Cases in Prospective Athletics Athletes Based on Socio-Demographic and Anthropometric Factors	2023	DRTPM	IDR 64.000
	5	Forecasting Missing Data Using a Hybrid Cokriging and Recurrent Neural Network Model: A Case Study of Rainfall in Surabaya City	2024	UNESA (non-state budget)	IDR 46.000
	6	Integration of Bivariate Logistic Regression and	2024	DRTPM	IDR 126.000

		Decision Tree Models for Initial Screening of Hypertension and Diabetes Cases in Prospective Athletics Athletes			
	7	Food Price Modeling Using Autoregressive Integrated Moving Average-Generalized Autoregressive Conditional Heteroskedasticity (ARIMA-GARCH)	2024	FMIPA UNESA	IDR 20.000
	8	Development of an Integrated Geographically Weighted Regression and Recurrent Neural Network Model to Analyze Stunting Cases in Indonesia	2025	UNESA (non-state budget)	IDR 30.000
	9	Copula-Based Modeling to Measure Dependency Risk in Insurance Claim Data	2025	FMIPA UNESA	IDR 20.000
	10	Design and Development of a Web-Based Integrated Information System for Social Media Content Development	2025	UNESA (non-state budget)	IDR 40.000
Industry collaboration over last 5 years					
Patents and proprietary rights	No	Title	Year		
	1	Batik Abinaya Hayyam Wuruk (batik artwork)	2021		
	2	Batik Tombak and Padma Raja Brawijaya (batik artwork)	2023		
	3	Process of Making Livestock Feed Wafer from Sugarcane Waste with Trichoderma sp. as Fermentor	2023		
	4	GUI for the Integration of Extreme Value Theory and Clustering (computer program)	2023		
	5	Stock Price Prediction Calculation Application Using GBM-KF (computer program)	2023		

	<p>6 Production of Black Turmeric Simplicia 2023</p> <p>7 Development of a Hybrid Cokriging and Elman Recurrent Neural Network (RNN) Model 2024</p> <p>8 Classification Optimization Procedure Using the Bat Algorithm in RStudio 2024</p> <p>9 Hybrid GWR and RNN Model 2025</p>
Important publications over last 5 years	<p>Total number: 24 journal articles and proceedings (2021 – 2025). Selected publications:</p> <ol style="list-style-type: none"> 1. Ariyanto, D., et al. (2025). K-means optimization with bat algorithm for predicting diabetes and hypertension risk in athletes' comparison with machine learning. <i>International Journal of Advances in Intelligent Informatics</i>, 11(4), 691–703. (Scopus) 2. Ariyanto, D., et al. (2025). Stock price prediction and simulation using Geometric Brownian Motion-Kalman Filter: A comparison between Kalman Filter algorithms. <i>BAREKENG: Jurnal Ilmu Matematika dan Terapan</i>, 19(1), 97–106. 3. Ariyanto, D., et al. (2024). Logistic and probit regression modeling to predict the opportunities of diabetes in prospective athletes. <i>BAREKENG: Jurnal Ilmu Matematika dan Terapan</i>, 18(3), 1391–1402. 4. Ariyanto, D., et al. (2024). Analysis of rainfall in Indonesia using a time series-based clustering approach. <i>BAREKENG: Jurnal Ilmu Matematika dan Terapan</i>, 18(2), 837–848. 5. Ariyanto, D., et al. (2024). Rainfall modeling using the Geographically Weighted Poisson Regression method. <i>BAREKENG: Jurnal Ilmu Matematika dan Terapan</i>, 18(1), 627–636. 6. Ariyanto, D., et al. (2024). Integration of bivariate logistic regression models and decision trees to explore the relationship between socio-demographic and anthropometric factors with the incidence of [remainder of title to be completed]. <i>Sport Mont</i>, 22(1), 71–78. (Scopus Q3) 7. Ariyanto, D., et al. (2023). Flooded area segmentation on remote sensing image from Unmanned Aerial Vehicles (UAV) using DeepLabV3 and EfficientNet-B4 model. In <i>Proceedings of the 2023 10th International Conference on Computer, Control, Informatics and its Applications (IC3INA 2023)</i>. (Scopus) 8. Ariyanto, D., et al. (2023). The effect of calendar variation and Sun-Earth distance on daily case forecasting for COVID-19 using the symbolic time series prognosis model. <i>International Journal of Sustainable Development and Planning</i>, 18(3), 891–896. (Scopus Q3) 9. Ariyanto, D., et al. (2022). Comparison of random forest and naïve Bayes methods for classifying and forecasting soil texture in the area around DAS Kalikonto, East Java. <i>BAREKENG: Jurnal Ilmu Matematika dan Terapan</i>, 16(4). 10. Ariyanto, D., et al. (2021). Prediction of soil particle size fraction using geographically weighted regression and random forest. <i>WSEAS Transactions on Mathematics</i>, 20. (Scopus Q3)
Activities in specialist bodies over the last 5 years	