LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul Karya Ilmiah	:	Predicting House Sale Price Using Fuzzy Logic, Artificial Neural Network and K-Nearest Neighbor		
Jumlah Penulis	:	Tiga (Muhammad Fahmi Mukhlishin, Ragil Saputra, Adi Wibowo)		
Status Pengusul	:	Penulis ke 3 (Tiga)		
Identitas Prosiding	:	a. Judul Prosiding	:	2017 1st International Conference on Informatics and Computational Sciences (ICICoS)
		b. ISBN/ISSN	:	978-1-5386-0903-3/0018-9219
		c. Thn Terbit, Tempat Pelaks.	:	2017 / Semarang Indonesia
		d. Penerbit/Organiser	:	IEEE / Universitas Diponegoro
		e. Alamat Repository/Web	:	https://ieeexplore.ieee.org/abstract/document/8276357
		Alamat Artikel	:	https://doc-pak.undip.ac.id/15698/1/C16.pdf
		f. Terindeks di (jika ada)	:	Scopus dan Word of Science

Kategori Publikasi Makalah : ☑ *Prosiding* Forum Ilmiah Internasional
(beri ✓pada kategori yang tepat) ☐ *Prosiding* Forum Ilmiah Nasional

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Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
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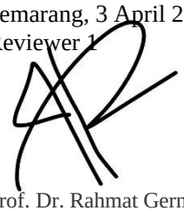
a. Kelengkapan unsur isi prosiding (10%)	2,5		2,5
b. Ruang lingkup dan kedalaman pembahasan (30%)	7,5		7
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	7,5		7
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	7,5		7,5
Total = (100%)	**25**		**24**
Nilai Pengusul = 40% x ½ x 24 = 4,8			

Catatan Penilaian artikel oleh Reviewer :

1. **<u>Kesesuaian dan kelengkapan unsur isi jurnal:</u>**
   Isi jurnal sesuai dan lengkap dengan komponen-komponennya: abstrak, pendahuluan, metode, hasil dan diskusu, lalu kesimpulan dan daftar pustaka, semuanya sesuai dan tepat.
2. **<u>Ruang lingkup dan kedalaman pembahasan:</u>**
   Paper ini membahas tentang penentuan nilai tanah dan rumah yang seringkali ditentukan oleh penjual, namun penentuan harga yang tepat dalam proses penjualan akan mempengaruhi keinginan pembeli untuk memilih dan menawar. Di Indonesia, karakteristik khusus seperti nilai objek pajak (NJOP) dan parameter lokasi sangat berpengaruh pada harga
3. **<u>Kecukupan dan kemutakhiran data/informasi dan metodologi:</u>**
   Data-data hasil yang diperoleh dalam penelitian baik dengan didukung metodologi yang tepat dengan jumlah referensi kurang dari 5 tahun sejumlah 6.
4. **<u>Kelengkapan unsur dan kualitas terbitan:</u>**
   Paper ini diterbitkan dalam conferences 2017 1st International Conference on Informatics and Computational Sciences (ICICoS).

Semarang, 3 April 2023
Reviewer 1



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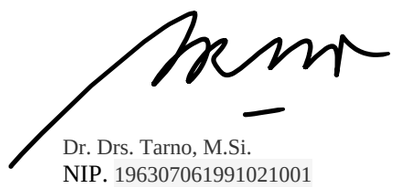
Nilai Pengusul = 40% x ½ x 24 = 4,8			

Catatan Penilaian artikel oleh Reviewer :

1. **<u>Kesesuaian dan kelengkapan unsur isi jurnal:</u>**
   Konten jurnal sudah lengkap sesuai dengan ketentuan yang berlaku.
2. **<u>Ruang lingkup dan kedalaman pembahasan:</u>**
   Ruang lingkup dalam paper ini, diusulkan prediksi nilai tanah dan rumah menggunakan beberapa metode. Logika Fuzzy, Jaringan Saraf Tiruan, dan K-Nearest Neighbor dibandingkan untuk menemukan metode yang paling sesuai yang dapat digunakan sebagai referensi untuk menentukan harga oleh penjual. Google Maps digunakan untuk merepresentasikan data spasial untuk parameter prediksi.
3. **<u>Kecukupan dan kemutakhiran data/informasi dan metodologi:</u>**
   Dalam studi tersebut, telah diperoleh sekumpulan informasi yang didukung oleh metodologi yang tepat dan didukung oleh referensi yang terbaru, yaitu kurang dari 5 tahun yang lalu, dengan total sebanyak 6.
4. **<u>Kelengkapan unsur dan kualitas terbitan:</u>**
   Paper ini dipublikasikan di sebuah conferences 2017 1st International Conference on Informatics and Computational Sciences (ICICoS).diterbitkan oleh IEEE Xplore. Paper tersebut memiliki semua unsur yang diperlukan dengan sangat baik.

Semarang, 3 April 2023
Reviewer 2



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Predicting house sale price using fuzzy logic, Artificial Neural Network and K-Nearest Neighbor

Mukhlishin, Muhammad Fahmi ; Saputra, Ragil ; Wibowo, Adi

Save all to author list

[a] Department of Informatics, Faculty of Science and Mathematics, Diponegoro University, Semarang, Indonesia

Abstract

Determining the value of land and home are regularly determined at the earliest by the seller, however determining the right price in the sales process will affect the buyer's desire to elect and bid. Special characteristics in Indonesia, tax object value (NJOP) and location parameters are high influence to the price . In this paper we proposed the prediction of land and house value using several methods. Fuzzy logic , Artificial Neural Network and K-Nearest Neighbor are compared in this paper to discover the most appropriate method that can be used as a reference for determining the price by the sellers. Google Maps is used to represent the spatial data for prediction parameter. The variables that used in the methods are NJOP of land, the locations, the age, NJOP of house , and the valuable location of the land. The experimental methods are tested by comparing between the real price transaction and the prediction using MAPE formula. © 2017 IEEE.

Author keywords
Artificial Neural Networks; Fuzzy ; House Price ; K-Nearest Neighbor

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ICICoS

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Santika Premiere Hotel, Semarang, Central Java, Indonesia

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Welcome Message from
The Dean of Faculty of Science and Mathematics,
Universitas Diponegoro

On behalf of all the academic staff and students of Faculty of Science and Mathematics, Universitas Diponegoro, I am very pleased and honored to welcome to all participants of the 2017 1st International Conference on Informatics and Computational Sciences (ICICoS) at Santika Premiere Hotel, Semarang.

The aim of ICICoS 2017 is to provide a forum for scientists, engineers and researchers to discuss and exchange novel ideas, results, experiences and work-in-process in the field of informatics and computational sciences. I am very glad that this conference address both informatics and computational sciences, as both are two related fields. Despite being the first international conference held by Department of Informatics, I am very confident that ICICoS 2017 will set high standards for its incoming paper and, consequently, will play an important role in encouraging research activities on informatics and Computational Science, especially in Indonesia. I hope that in this conference, not only research results are shared, but also some fruitful collaborations can be established.

I would also like to express my sincere gratitude to the distinguished keynote speakers for their presence to this conference. In addition, I would like to thank all the program committee members for their effort in thoroughly reviewing the incoming papers and selecting high quality papers.

Last, but not least, it is my hope that you find the conference stimulating, fulfilling and enjoyable. I wish you a pleasant experience for the rest of your stay in Semarang.

Sincerely,

Prof. Dr. Widowati, **M.Si**
Dean of Faculty of Science and Mathematics
Universitas Diponegoro

Welcome Message from General Chair

On behalf of the organizing committee, I am delighted to welcome all participants to the 2017 1st International Conference on Informatics and Computational Sciences (ICICoS). This conference is the first international conference held by Department of Informatics, Universitas Diponegoro and took place in Santika Premiere Hotel, Semarang from November 15th to November 16th, 2017.

This conference aims to provide a platform for researchers, academicians, professionals, engineers, and students to share their research ideas and results of research especially in the field of informatics, computational science and related field.

In this conference, the committee decided to choose the following theme: "**Enhancing the Role of Informatics and Computational Science in the Era of Data Science".** This highlight is chosen to acknowledge the importance of data science field and hence further motivate researchers, academicians, professionals, engineers, and students to perform study on this field.

Nearly 150 academicians, researcher, practitioner and presenters from 7 countries (Australia, Austria, Croatia, Indonesia, Japan, Malaysia, and United States of America) have gathered and 101 papers are submitted for this conference. Each paper has been reviewed with tight criteria from our invited reviewers. Based on the review result, 46 papers have been accepted, which lead to an acceptance rate of 45.5%.

This conference will not be successful without extensive effort from many parties. I would like to express my sincere gratitude and appreciation to all participants who participate in this conference. Special acknowledgement should go to the TPC chairs and Technical Program Committee Member for their thorough and timely reviewing of the papers. We would also like to thank our sponsors, PT Telekomunikasi Indonesia and PT Bank Mandiri, who have helped us to keep down the costs of ICICoS 2017 for all participants. Recognition should go to the Local Organizing Committee members, my colleagues and students from Department of Informatics, Faculty of Science and Mathematics, Universitas Diponegoro, who have put enormous effort and support for this conference.

At last, we hope that you have an enjoyable and inspiring moment during our conference. Thank you for your participation on ICICoS 2017.

Sincerely

Dr. Retno Kusumaningrum, S.Si., M.Kom.
General Chair of ICICoS 2017

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PROGRAM SCHEDULE

Wednesday November 15th, 2017

Time	Event	Event Details	Rooms
07.30-08.30	Registration		Pre-function Hall
08.30-08.45	Opening Ceremony	Opening speech from the General Chair of ICICoS 2017 **(Dr. Retno Kusumaningrum, S.Si., M.Kom.)**	Borobudur 1 Room
08.45-09.00		Opening speech from the Dean of Faculty of Science and Mathematics, Universitas Diponegoro **(Prof. Dr. Widowati M.Si.)**	
09.00-09.15		Photo session	
09.15-10.05	Plenary Session I	Keynote Speaker I **Dr. Denise de Vries** **The Future of Data Science Depends on Providing for Data Preservation Now**	
10.05-10.10		Ceremonial gift, from the Dean of Faculty of Science and Mathematics Universitas Diponegoro to **Dr Denise de Vries**	
10.10-10.40	Coffee Break		
10.40-11.30	Plenary Session II	Keynote Speaker II **Associate Prof. Dr. Kosuke Sekiyama** **Visual Cognitive Sharing and Cognitive Support for Human-Robot Cooperation**	Borobudur 1 Room
11.30-11.35		Ceremonial gift, from the Head of Informatics Department, Universitas Diponegoro to **Associate Prof. Dr Kosuke Sekiyama**	
11.35-11.45	ICICoS Photo Session		
11.45-13.00	Lunch		Restaurant
13.00-15.00	Parallel Session I	Four Parallel Sessions	Borobudur 1 Room, Sewu Room, Prambanan Room, Kalasan Room
15.00-15.30	Coffee Break		

15.30-17.00	Parallel Session II	Four Parallel Sessions	Borobudur 1 Room, Sewu Room, Prambanan Room, Kalasan Room
17.00-18.30	Free Session		
18.30-21.00	Gala Dinner*)		Borobudur 1 Room

Thursday November 16th, 2017

Time	Event	Rooms
08.00-14.00	Semarang City Tour	-

PROGRAM SCHEDULE – Parallel Session Schedule

Parallel Session – Information Security and Computer Vision Prambanan Room (Second Floor)			
Session	**Time**	**Author**	**Title**
Parallel Session 1	13.00 – 13.15	Candra Irawan, De Rosal Ignatius Moses Setiadi, Christy Atika Sari and Eko Hari Rachmawanto	Hiding and Securing Message on Edge Areas of Image using LSB Steganography and OTP Encryption
	13.15 – 13.30	Devvi Sarwinda, Alhadi Bustamam and Ari Wibisono	A Complete Modelling of Local Binary Pattern for Detection of Diabetic Retinopathy
	13.30 – 13.45	Teny Handhayani, Janson Hendryli and Lely Hiryanto	Comparison of Shallow and Deep Learning Models for Classification of Lasem Batik Patterns
	13.45 – 14.00	I Made Oka Widyantara, I Made Dwi Putra Asana, Ni Made Ary Esta Dewi Wirastuti and Ida Bagus Putu Adnyana	Gamma Correction-Based Image Enhancement and Canny Edge Detection for Shoreline Extraction from Coastal Imagery
	14.00 – 14.15	Latifa Nabila Harfiya, Agus Wahyu Widodo and Randy Cahya Wihandika	Offline Signature Verification Based on Pyramid Histogram of Oriented Gradient Features
	14.15 – 14.30	Muhammad R. Wiratama, Sukmawati N. Endah, Retno Kusumaningrum and Helmie A. Wibawa	Pornography Object Detection Using Viola-Jones Algorithm and Skin Detection
	14.30 – 14.45	Muhammad Ihsan Mas, Mohamad Ivan Fanany, Timotius Devin and Lintang A. Sutawika	Constant-Amplitude Fatigue Crack Growth Sequence Regression on an Aircraft Lap Joint Using a 1-D Convolutional Network
	14.45 – 15.00	Muhammad Khaerul Anam, Eko Adi Sarwoko, Edy Suharto and Kharis Khasburrahman	Random Pixel Embedding for Hiding Secret Text Over Video File
	15.00 – 15.30	Coffee Break	
Parallel Session 2	15.30 – 15.45	Muhammad Najih, De Rosal Ignatius Moses Setiadi, Eko Hari Rachmawanto, Christy Atika Sari and Setia Astuti	An Improved Secure Image Hiding Technique Using PN-Sequence Based On DCT-OTP
	15.45 – 16.00	Putu Desiana Wulaning Ayu and Gede Angga Pradipta	Egg's Diameter Detection Using Fuzzy C-Means and Iterative Random Hough Transform
	16.00 – 16.15	Rismiyati, Khadijah and Adi Nurhadiyatna	Deep Learning for Handwritten Javanese Character Recognition
	16.15 – 16.30	Sukmawati N. Endah, Helmie A. Wibawa and Retno Kusumaningrum	Skin Detection Based on Local Representation of YCbCr Color Moment
	16.30 – 16.45	Gede Angga Pradipta and Putu Desiana Wulaning Ayu	Fetal Weight Prediction Based on Ultrasound Image Using Fuzzy C Means Clustering and Itterative Random Hough Transform

Parallel Session – Information System and Software Engineering Sewu Room (First Floor)			
Session	**Time**	**Author**	**Title**
Parallel Session 1	13.00 – 13.15	Dinar Mutiara Kusumo Nugraheni and Denise de Vries	The effectiveness of SMS as verification of flood early warning messages from users' perception
	13.15 – 13.30	Dodisutarma Lapihu, Mustafid and R. Rizal Isnanto	IT Governance in Public Organization Based on ITBSC and COBIT 5: The Case of Kupang Municipality
	13.30 – 13.45	Oerianto Guyandi, Teguh Sriwidadi, Gunawan Wang, Hartiwi Prabowo and Rini Kurnia Sari	Assessing Bike Sharing Business Model
	13.45 – 14.00	Ida Bagus Kresna Sudiatmika, Rupika Jimbara and Djoko Budiyanto Setyohadi	Determination of Assistance to The Poor by Integrating Fuzzy AHP and TOPSIS Models: Case Study Bali Province
	14.00 – 14.15	Ni Putu Indah Rosita Devy, Sunu Wibirama and Paulus Insap Santosa	Evaluating User Experience of English Learning Interface Using User Experience Questionnaire and System Usability Scale
	14.15 – 14.30	Oktavianus Lumasuge, Vincencius Gunawan and Catur Edi Widodo	Implementation Analytic Network Process Method and Geographic Information System to Determine the Freshwater Fish Farming Location
	14.30 – 14.45	Peb R. Aryan, Fajar J. Ekaputra, Elmar Kiesling, Kabul Kurniawan and A Min Tjoa	RMLx: Mapping Interface for Integrating Open Data with Linked Data Exploration Environment
	14.45 – 15.30	Coffee Break	
Parallel Session 2	15.30 – 15.45	Prabaria Vesca Yulianandra, Sunu Wibirama and Paulus Insap Santosa	Examining the Effect of Website Complexity and Task Complexity in Web-Based Learning Management System
	15.45 – 16.00	Rianto, Djoko Budiyanto Setyohadi and Suyoto	AHP-TOPSIS on Selection of New University Students and the Prediction of Future Employment
	16.00 – 16.15	Satriyo Adhy, Beta Noranita, Retno Kusumaningrum, Panji Wisnu Wirawan, Dimas Dwi Prasetya and Fauzanil Zaki	Usability Testing of Weather Monitoring on a Web Application

Parallel Session – Machine Learning and Data Mining Borobudur 1 Room (Second Floor)			
Session	**Time**	**Author**	**Title**
Parallel Session 1	13.00 – 13.15	A. Steven, G.F. Hertono and B.D. Handari	Implementation of Clustered Ant Colony Optimization in Solving Fixed Destination Multiple Depot Multiple Traveling Salesman Problem
	13.15 – 13.30	Fadil Maulana and Sukmawati Nur Endah	Comparison Selection of Attributes in Preprocessing Data for Diagnosis of Diabetes
	13.30 – 13.45	I Nyoman Rudy Hendrawan and I Gusti Ngurah Wikranta Arsa	Zolertia Z1 Energy Usage Simulation with Cooja Simulator
	13.45 – 14.00	Jatmiko Endro Suseno and Muhammad Burhanudin	The Signal Processing of Heart Sound from Digital Stethoscope for Identification of Heart Condition Using Wavelet Transform and Neural Network
	14.00 – 14.15	Khadijah, Rismiyati and Aprinaldi Jasa Mantau	Multiclass Classification of Cancer Based on Microarray Data Using Extreme Learning Machine
	14.15 – 14.30	Kharis Khasburrahman, Adi Wibowo, Hairulazwan bin Hashim, Indra Waspada and Wisnu Jatmiko	Comparison of Diagnostics Set and Feature Selection for Breast Cancer Classification based on microRNA Expression
	14.30 – 14.45	Muhammad Fahmi Mukhlishin, Ragil Saputra and Adi Wibowo	Predicting House Sale Price using Fuzzy Logic, Artificial Neural Network and K-Nearest Neighbor
	14.45 – 15.00	Nico Surantha, Sani M. Isa, Tri Fennia Lesmana and I Made Agus Setiawan	Sleep Stage Classification using the Combination of SVM and PSO
	15.00 – 15.30	Coffee Break	
Parallel Session 2	15.30 – 15.45	Priyo Sidik Sasongko, Helmie Arif Wibawa, Fadil Maulana and Nurdin Bachtiar	Performance Comparison of Artificial Neural Network Models for Dengue Fever Disease Detection
	15.45 – 16.00	Sukmawati Nur Endah, Aris Puji Widodo, Muhammad Lukman Fariq, Shavira Ifrinda Nadianada and Fadil Maulana	Beyond Back-Propagation Learning for Diabetic Detection: Convergence Comparison of Gradient Descent, Momentum and Adaptive Learning Rate
	16.00 – 16.15	Syahrul and M. Ghozali	Design and Implementation of Tipping-Bucket Rain Gauge
	16.15 – 16.30	Tarno, Agus Rusgiyono, Sugito and Budi Warsito	Inference Procedure Based on LM-Test in ANFIS for Constructing Time Series Model
	16.30 – 16.45	Yoga Pristyanto, Noor Akhmad Setiawan and Igi Ardiyanto	Hybrid Resampling to Handle Imbalanced Class on Classification of Student Performance in Classroom
	16.45 – 17.00	Ichsani Mursidah and Hendri Murfi	Analysis of Initialization Methods on a Fuzzy C-Means Algorithm Based on Singular Value Decomposition for Topic Detection

Parallel Session – Natural Language Processing Kalasan Room (Second Floor)			
Session	**Time**	**Author**	**Title**
Parallel Session 1	13.00 – 13.15	Devi Munandar, Endang Suryawati, Dianadewi Riswantini, Achmad Fatchuttamam Abka, Rini Wijayanti and Andria Arisal	POS-Tagging for Non-English Tweets: An Automatic Approach (Study in Bahasa Indonesia)
	13.15 – 13.30	Ika Dwi Novitasari, Hendri Murfi and Arie Wibowo	Finding Anchor Words of Separable-Nonnegative Matrix Factorization based on Singular Value Decomposition
	13.30 – 13.45	Kartika Syskya Wydya, Hendri Murfi and Yudi Satria	Evaluation of the Accuracy of Transfer Learning on Sentiment Analysis for Indonesian Tweets
	13.45 – 14.00	Muljono, Umriya Afini and Catur Supriyanto	Morphology Analysis for Hidden Markov Model based Indonesian Part-of-Speech Tagger
	14.00 – 14.15	Noviantho, Sani Muhamad Isa and Livia Ashianti	Cyberbullying Classification using Text Mining
	14.15 – 14.30	Rifki Adhitama, Retno Kusumaningrum and Rahmat Gernowo	Topic Labeling Towards News Document Collection Based on Latent Dirichlet Allocation and Ontology
	14.30 – 14.45	Risma Mustika Cahyaningtyas, Retno Kusumaningrum, Sutikno, Suhartono and Djalal Er Riyanto	Emotion Detection of Tweets in Indonesian Language Using LDA and Expression Symbol Conversion

PROGRAM SCHEDULE – Gala Dinner

Wednesday November 15th, 2017

Time	Events	Rooms
18.30-19.00	Registration	Borobudur 1 Room
19.00-19.10	Welcome speech from the General Chair of ICICoS 2017 **(Dr. Retno Kusumaningrum, S.Si., M.Kom.)**	
19.10-19.15	Performance: **MOI band**	
19.15-19.20	**Patronage recognition** Ceremonial gift, from the ICICoS 2017 Chair to **the patronages**	
19.20-19.30	Performance: Javanese traditional Dance **Warak Dugder Dance**	
19.30-19.35	**Announcement for best presenters** and Ceremonial gift, from the Head of Informatics Department, Faculty of Science and Mathematics, Universitas Diponegoro to **the winners**	
19.35-19.40	Performance: **MOI band**	
19.40-19.45	**Announcement of Best Paper Award** Ceremonial gift, from the Dean of Faculty of Science and Mathematics Universitas Diponegoro to **the winner**	
19.45-19.50	Closing	
19.50-20.00	Photo session	
20.00-21.00	Performance: **MOI band** Gala Dinner Free Session	

Table of Content

INFORMATION SECURITY AND COMPUTER VISION

INFORMATION SYSTEM AND SOFTWARE ENGINEERING

MACHINE LEARNING AND DATA MINING