

**LEAST ABSOLUTE SHRINKAGE AND SELECTION OPERATOR
(LASSO) AND K-NEAREST NEIGHBORS (K-NN) ALGORITHM
ANALYSIS BASED ON FEATURE SELECTION FOR
DIAMOND PRICE PREDICTION**

JALUR SCIENTIST



disusun oleh

Shafilah Ahmad Fitriani

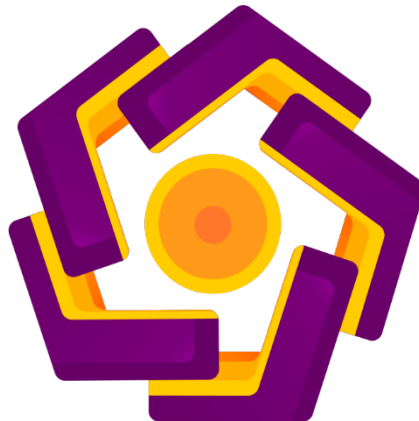
18.11.2051

**PROGRAM SARJANA
PROGRAM STUDI INFORMATIKA
FAKULTAS ILMU KOMPUTER
UNIVERSITAS AMIKOM YOGYAKARTA
YOGYAKARTA
2022**

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DIAMOND PRICE PREDICTION**

JALUR SCIENTIST

untuk memenuhi sebagian persyaratan
mencapai gelar Sarjana
pada Program Studi Informatika



disusun oleh

Shafilah Ahmad Fitriani

18.11.2051

**PROGRAM SARJANA
PROGRAM STUDI INFORMATIKA
FAKULTAS ILMU KOMPUTER
UNIVERSITAS AMIKOM YOGYAKARTA
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PERSETUJUAN

JALUR SCIENTIST

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yang dipersiapkan dan disusun oleh

Shafilah Ahmad Fitriani

18.11.2051

telah disetujui oleh Dosen Pembimbing Riset Kolaborasi
pada tanggal 12 September 2021

Dosen Pembimbing,

Yuli Astuti, M.Kom.

NIK. 190302146

PENGESAHAN

JALUR SCIENTIST

**LEAST ABSOLUTE SHRINKAGE AND SELECTION OPERATOR
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yang dipersiapkan dan disusun oleh

Shafilah Ahmad Fitriani

18.11.2051

telah dipertahankan di depan Dewan Penguji
pada tanggal 21 Februari 2022

Susunan Dewan Penguji

Nama Penguji

Tanda Tangan

Andi Sunyoto, M.Kom., Dr.
NIK. 190302052

Yoga Pristyanto, S.Kom, M.Eng
NIK. 190302412

Yuli Astuti, M.Kom
NIK. 190302146

Naskah Publikasi ini telah diterima sebagai salah satu persyaratan
untuk memperoleh gelar Sarjana Komputer
Tanggal 21 Februari 2022

DEKAN FAKULTAS ILMU KOMPUTER

Hanif Al Fatta, S.Kom., M.Kom.
NIK. 190302096

IDENTITAS PROSIDING

- IDENTITAS DOSEN DAN MAHASISWA

▪ Nama Dosen :

1. Yuli Astuti, M.Kom
2. Irma Rofni Wulandari, S.Pd., M.Eng.

▪ Identitas Mahasiswa :

Nama Mahasiswa : Shafilah Ahmad Fitriani
NIM : 18.11.2051
Jurusan : S1-Informatika

- IDENTITAS JURNAL

1. Judul Jurnal :
Least Absolute Shrinkage and Selection Operator (LASSO) and k-Nearest Neighbors (k-NN) Algorithm Analysis Based on Feature Selection for Diamond Price Prediction
2. Halaman : 6 halaman
3. Bahasa : Inggris
4. Tanggal Pembuatan : 19 November 2021 – 15 Desember 2021
5. Diterima : 18 Januari 2022
6. Conference :
2021 International Seminar on Machine Learning, Optimization, and Data Science (ISMODE)

LEMBAR REVIEW

Review 1

Technical content and scientific rigour	Novelty and originality	Quality of presentation	Relevance and timeliness	Recommendation	Check list
Average (3)	Average (3)	Average (3)	Average (3)	Accept (3)	2nd

Length of pages (Is the draft over the allotted maximum of 6 pages in the IEEE template? (or is it below the required minimum of 4 pages for extended abstract?))

Is the length appropriate?

Could be shorter:

Could be longer:

Please identify specific areas that can be removed.)

The length of paper is appropriate

English writing quality (This is regarding English writing/Grammar issues.

Is the writing clear enough to convey the meaning?

Grammar issues: This conference does not have the luxury of having staff editors who will collaborate with the authors of accepted papers on the used IEEE template style and organization. So your help is appreciated on this matter.

If there are grammar issues, point out at least a few to the authors so that the authors can check the grammar carefully or have the paper checked by someone else.

Please contact TPC immediately if the grammar issues hinder the prompt review. (TPC may contact the authors to ask for re-submission of the paper after a quick grammar-only fix if the content seems worthwhile. Of course, if the content does not seem to warrant such handling, we may simply reject the paper.)

The writing is clear enough to convey the meaning.

Points to stress (Assuming that the paper is ACCEPTED, please list two (2) points (or more if you would like) that are covered in the draft and you would like the presenter to explain in detail.

If you are REJECTing the paper, simply fill in the field with something like "I am rejecting this submission, but EDAS won't let me simply reject it without my writing something in this field. Bah, humbug _____". Also, please list two (2) points (or more if you would like) that are NOT covered in the draft and you would like the presenter to cover if possible.)

Make charts/tables stronger

The model should be presented clearly using diagram

Review 2

Technical content and scientific rigour	Novelty and originality	Quality of presentation	Relevance and timeliness	Recommendation	Check list
Average (3)	Good (4)	Average (3)	Good (4)	Accept (3)	2nd

Length of pages (Is the draft over the allotted maximum of 6 pages in the IEEE template? (or is it below the required minimum of 4 pages for extended abstract?))

Is the length appropriate?

Could be shorter:

Could be longer:

Please identify specific areas that can be removed.)

The length of the paper is appropriate, but there is some more space to add the contribution of the paper to knowledge and practices.

English writing quality (This is regarding English writing/Grammar issues.

Is the writing clear enough to convey the meaning?

Grammar issues: This conference does not have the luxury of having staff editors who will collaborate with the authors of accepted papers on the used IEEE template style and organization. So your help is appreciated on this matter.

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Use an English as the primary origin language < not 100% English

Points to stress (Assuming that the paper is ACCEPTED, please list two (2) points (or more if you would like) that are covered in the draft and you would like the presenter to explain in detail.

If you are REJECTing the paper, simply fill in the field with something like "I am rejecting this submission, but EDAS won't let me simply reject it without my writing something in this field. Bah, humbug _____". Also, please list two (2) points (or more if you would like) that are NOT covered in the draft and you would like the presenter to cover if possible.)

The topic of this research is interesting and suitable for SIACOE

Review 3

Technical content and scientific rigour	Novelty and originality	Quality of presentation	Relevance and timeliness	Recommendation	Check list
Below Average (2)	Below Average (2)	Below Average (2)	Average (3)	Reject/Refer (1)	2nd

Length of pages (Is the draft over the allotted maximum of 6 pages in the IEEE template? (or is it below the required minimum of 4 pages for extended abstract?))

Is the length appropriate?

Could be shorter:

Could be longer:

Please identify specific areas that can be removed.)

Shorten

English writing quality (This is regarding English writing/Grammar issues.

Is the writing clear enough to convey the meaning?

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Please contact TPC immediately if the grammar issues hinder the prompt review. (TPC may contact the authors to ask for re-submission of the paper after a quick grammar-only fix if the content seems worthwhile. Of course, if the content does not seem to warrant such handling, we may simply reject the paper.)

English is bad, probably badly translated from Bahasa Indonesia

Points to stress (Assuming that the paper is ACCEPTED, please list two (2) points (or more if you would like) that are covered in the draft and you would like the presenter to explain in detail.

If you are REJECTing the paper, simply fill in the field with something like "I am rejecting this submission, but EDAS won't let me simply reject it without my writing something in this field. Bah, humbug _____". Also, please list two (2) points (or more if you would like) that are NOT covered in the draft and you would like the presenter to cover if possible.)

Make conclusions stronger

Need to improve the English

LEMBAR PERSETUJUAN (LOA)


A. Accepted

The image shows a Gmail email and a web browser interface. The email is from ismode@unskri.ac.id to Yuli Astuti, dated Tue, Jan 18, 2022. The subject is "[2021 ISMODE] Your paper #1570781664 ('Least Absolute Shrinkage and Selection Operator (LASSO) and k-Nearest Neighbors (k-NN) Algorithm Analysis Based on Feature Selection for Diamond Price Prediction')". The email content includes a congratulatory message, a list of steps for authors to follow, and a review section with technical content and scientific rigor, novelty and originality, quality of presentation, and relevance and timeliness.

The web browser shows the EDAS system interface for the paper #1570781664. The interface includes a table of authors, a title, abstract, keywords, topics, registration, session, DOI, URL, status, copyright form, review manuscript, final/accepted manuscript/PDF submission, presentation, and auxiliary files.

Property	Change	Add	Value																																								
Conference and track			2021 International Seminar on Machine Learning, Optimization, and Data Science ISMODE - Full papers																																								
Authors			<table border="1"><thead><tr><th>Name</th><th>ID</th><th>Edit</th><th>Flag</th><th>Affiliation (edit for paper)</th><th>Email</th><th>Country</th><th>Email</th><th>Delete</th><th>Register</th></tr></thead><tbody><tr><td>Shafiah Ahmad Fitriani</td><td>1919744</td><td>edit</td><td></td><td>University of AMIKOM Indonesia</td><td>shafiah@student.amikom.ac.id</td><td>Indonesia</td><td></td><td></td><td></td></tr><tr><td>Yuli Astuti</td><td>1729621</td><td>not creator</td><td></td><td>Yogyakarta Amikom University, Indonesia</td><td>yuli@amikom.ac.id</td><td>Indonesia</td><td></td><td></td><td></td></tr><tr><td>Irma Rohi Wulandari</td><td>1766664</td><td>not creator</td><td></td><td>Universitas Amikom Yogyakarta, Indonesia</td><td>irma@amikom.ac.id</td><td>Indonesia</td><td></td><td></td><td></td></tr></tbody></table>	Name	ID	Edit	Flag	Affiliation (edit for paper)	Email	Country	Email	Delete	Register	Shafiah Ahmad Fitriani	1919744	edit		University of AMIKOM Indonesia	shafiah@student.amikom.ac.id	Indonesia				Yuli Astuti	1729621	not creator		Yogyakarta Amikom University, Indonesia	yuli@amikom.ac.id	Indonesia				Irma Rohi Wulandari	1766664	not creator		Universitas Amikom Yogyakarta, Indonesia	irma@amikom.ac.id	Indonesia			
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Title	Only the main (0) language (max 255 characters)		Least Absolute Shrinkage and Selection Operator (LASSO) and k-Nearest Neighbors (k-NN) Algorithm Analysis Based on Feature Selection for Diamond Price Prediction																																								
Abstract	Only the main (0) language (max 5000 characters)		Diamonds are the most expensive, rarest, and most complex gemstones globally. Diamond investing is a new lifestyle however, diamond prices fluctuate and are difficult to predict. Predicting the price of diamonds can be done using a regression technique because the price is continuous. Regression is part of the field of machine learning. This study aims to find the most efficient and accurate model. The models used to predict diamond prices are k-Nearest Neighbors (k-NN) and Least Absolute Shrinkage and Selection Operator (LASSO). The process is carried out by selecting features, considering the value of k from k-NN and alpha from LASSO to ensure optimal accuracy. The date of this research is public and taken from Kaggle. The number of datasets is around 84000 data and it is divided into training data by 80% and testing data by 20%. The results showed that k-NN has the highest accuracy of 0.9066 compared to LASSO, which was 0.8001. Meanwhile, the RMSE level shows that k-NN has the smallest value, 926.96 compared to LASSO, 1048.59.																																								
Keywords	Only the main (0) language (max 255 characters)		Machine learning, Diamonds, k-NN, LASSO																																								
Topics			Machine Learning																																								
Presentation			Shafiah Ahmad Fitriani (bio) [edit]																																								
Registration			Yuli Astuti has registered and paid for Dutch School Reg [edit]																																								
Session			2A: Parallel Session (A from Sat., January 29, 2022 09:30 until 11:30 (1st paper) in Room A (5) mpa.)																																								
DOI	Only the main (0) language (max 255 characters)																																										
URL	Only the main (0) language (max 255 characters)																																										
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Review manuscript			<table border="1"><thead><tr><th>Document (show)</th><th>Pages</th><th>File size</th><th>Changed</th><th>Similarity rating</th></tr></thead><tbody><tr><td></td><td>6</td><td>423.37K</td><td>Dec 13, 2021 22:28 Asia/Pontianak</td><td>13</td></tr></tbody></table>	Document (show)	Pages	File size	Changed	Similarity rating		6	423.37K	Dec 13, 2021 22:28 Asia/Pontianak	13																														
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Auxiliary files	Could upload until Jan 25, 2022 03:59 Asia/Pontianak.																																										

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Conference	Paper title abstract	Status	File	File size (KB)	Abstract	Keywords	Pre-submission	Final submission (Accepted PDF must be submitted to IJER)
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