T. Manisai Lokesh V09180A 192224105 Artifical Intelligence & Dota Guide: Manikandan

Hint Paper: 1

Title: Im Proving social media impact Prediction accuracy for marketing strategy an analysis of Random forest and Logistic Regression.

Paragraph 1:

pefination

- * The application of machine Learning techniques to forecast the Potential impact or user content may have social media Platforms,
- * Analysis of Engogement, interactions these Predictive models.
- * To Provide Ansights a user content audience, aiding in decision making for marketing Purpose.
- The goal Provide marketers insights, influential users and tailor marketing strategies for offimal reach impact dynamic land scafe of social media.

Importance:

- 1) Business and marketing: It servers a Powerful Platforms for business to reach and target audience. It is cost effective way to Promote Product & services.
- 2) Awarness and Activisms Plays a crucial role raising awarness about issues, fromoting activism.
- 3) Global connectivity: break down barries connectivity ReoPle diverse backgrounds clusters globalized digital community.

Applications:

- * The Professional network connected with family, forlends & collegues.
- * To share information content, articals, videos and coealive expression. for board awarness
- * In real time news & information dissemination. global events & trends.
- * customer support through social media channels feedback &

Paragraph - 2:-

Number of Articles!

- * Science direct 501
- * IEEE 1850
- * Google scholar 1355

Most cited Articles:

- [1] Li, sing xvon, et al. " social network user influence sense-making and dynamics Prediction." Expert system with applications 41.11 (2014): 5115-5124.
- Predict social media influence operations." science advances

 Al Marone.
- [3] Al Marouf, Hason, (2020). comfartive Analysis of feature selection algo rithium for comfational Personality comfutional social media. IEEE Transctions on comfutional social systems, 7(3) 587-599.

Yu, sheng, and subhash kak. "A survey of Prediction using social media." as xiv Preprint as xiv: 1203.

Best study!

- * Illustrating the latent capacity of machine learning techniques in anticiPation of social media insimilar
- * Business Promotion Powerful for marketing strategy and advertising are high income.
- * They increased deamnd & supply occurrences in future.

Paragraph 3!-

Existing Algorithium:

- * In the existing algorithium, the accuracy is less because of the comparision of short Period of data.
- * The Machine trained used the existing can Predict the social media influence in marketing stategy to owner. Aim of the Algorithium!

Utiliting the machine learning Algorithium and social media influence analysis to develop robust models and Predict influence of users on social media content. Enhancing market strategies Provide insights, Utimately tecision making Process for business and organizations.

Materials And Methods:

Paragraph 1:-

study setting: SIMATS school of Engineering

No of Groups! 2

Group 1: Random forest

Group 2: Logistic Regression

sample size: 20

Pataset! Predicting the accuracy ocurances of social media influences.

G. Power: 80%.

Paragraph e!

Pata sample Preparation

Group 1: Random forest

Group 2: Ada-Boost

* Information: Pataset

* APPly Random Forest Algorithium

* calculate the total no of users see in the Post.

* colculate the occupacy of social media, Prediction.

Paragraph 3!-

* Data sample PreParation Group 2? Logistic Regression

- * Information: Potoset
- * Applying Logistic Regression Algorithium
- * calculate the total no of Peoples can see Post
- * calculate the accuracy of social media influence

Paragraph 4!-

Testing setup

- * Google colab
- * in Intel 8th Gen
- * 8 GB RAM
- * windows 10 os

Poragraph 3!-

statistical Analysis

- * Utilizing version 26.0 of IBM spss software, computation were Performed.
- * Provided values are -> Mean

-> standard deviation

-> standard error mean.

Independent variable! pate, 201, 1AT settlement, index, Age, Education, Field,

Defedent variable: social media influence time in hours.

- * Analysis done : yes
- * Result! Random forest has better Prediction than the logistic Regression.
- * Notably independent variable of interest is rough
- * perendent variable of Research size and recorded data vitilized of T-test outcomes.

Limitations!

- * Inorder to manimize the fetch time and increase
- * Bulk Lata analysis is complicated.

Future scope!

* Accuracy increased using Random Forest Algorithium. Testing Procedure!

- * PreParing the dataset
- Train 70.1. of the pataset
- * Test 30.1. of the Pataset
- * create Embedded model using Random Forest algorithium

Results and Discussions:

* ImProving Accuracy in Prediction of social media influence among analysis in marketing strategies by minimizing false

* using Random Forest Algorithium and support vector Machine.

Paragraph 11-

In this study we defined that the Random Forest Algorithium has better Prediction than the Logistic Regression.

Paragraph 2!-

Pata collection!

- * Data is trained
- * solved Embedded model
- * Input sample paraset.
 - i) Agta: Above 28
 - ii) Time Id: Engineering
 - iii) Education! Bachelos's Degree
 - iv) settlement: Urban.

conclusion:

- * The analysis of Random forest and logistic Regression models forecasting social media's influence on marketing strategy, both techniques enhance accuracy.
- * models enhances Predictive capabilities, empowering marketers with more Precise insights.

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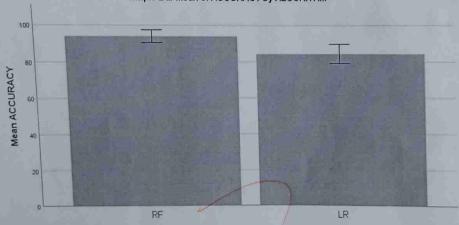
ALGORITHM CCURACY RF LR	ALGORITHM	N	Mean	Cut page	Std. Error Mean	
	RF	20	93,90	Std. Deviation		
	LR	20		1.744		
		20	84,35	2.641	.591	

Independent Samples Test

Levene's Test for Equality

		of Variances				t-i				
						Sig. (2-	Mean	Std. Error	95% Confidence interval of the Difference	
		F	Sig.	t	df	tailed)	Difference	Difference	Lower	Upper
ACGURAC Y	Equal variances assumed	5.950	.020	13.493	38	.025	9,550	.708	8.117	10.983
	Equal variances not assumed			13.493	32.923	,025	9.550	.708	8.110	10.990

Simple Bar Mean of ACCURACY by ALGORITHM



ALGORITHM

Error Bars: 95% CI Error Bars: +/- 2 SD