Name: K-1-V Jayaram (ourse (de: SP1 (4A07 Guide! - Dr.A-Moorthy Reg. No. - 1922/03/4 Dept: CSE Project No:-55E/26/10/314-3 Title -3 ! Enhancing Job Rescission Forecasting: XGBoost us Support Vector Machines Performance Evaluation. Introduction: Paragraph - 1: study compares the predictive performance of 1) Definition: XGBoost and support vector machines (sum) in Enhancing Job rescission events in the industry. Job regission reform to cathdrawal of employment offers before an employee 2) Importance in Today's World: > Economic Planning: Reliable predictions assist organizations and policynakers in implementing strategies to mitigate unemployment risks. -> Resource Allocation: Enhance decision-making regarding resource distribution and talent management within companies.

#### Applications of Research!

Provides insights for arear advisors to guide individuals in making informed employment decisions.

\* fluman Resources:

Aids HR departments in identitying potential job vescission scenarios, allowing tor proactive interventions.

Paragraph - 2:-

## 1) Total Number of articles Published in Past Syears.

-) A systematic literature review overing from zolz to April 2023 identified 52 relevant paer-reviewed studies on machine learning techniques for predicting employee turnover. This indicates a growing interest and substantial research output in this area over the part decade. Continuously assessing the effectiveness of retention strategies through predictive analytics.

# Taragraph-3:-

1) Existing Experience in Research!

Previous studies have demonstrated the efficiency of machine learning models like SVM and XGBoost in various predictive tasks. For instance, research comparing these algorithms in forecasting faily global solar radiation found both models to be effective, with xGBoost showing greator stability and efficiency.

2) Aim of Study:

To evaluate and compare the performance of XGBoost and SVM algorithms in accurately forecasting job rescission. events, thereby identifying the more suitable trade! for this application.

Materials and Methods:

Paragraph-1:

Study setting - SIMATS [SIMATS Engineering]

No. of Grays: 2

Group 1: XGB

Group 2: SVM

\* this step took advantage of the data exploration and Quality verification made carlier to create the firm tata.

### 2) Most Cited Articles and Findings:

-) One Motable study is approacher Evaluation of Support vector Machine classification approaches in the mining", which has been widely cited for its comprehensive analysis of support vector machine applications accross various tomains.

## 3) Best Study it our Opinion i

Research on Economic Recession Prediction Model from the Multiple Behavioral Features Prerspective

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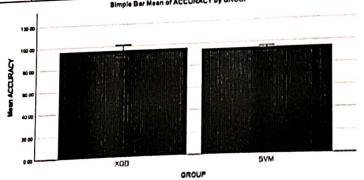
-Published on June 21,2019.

taragraph -2:-Same Groups -Pseudo Code -XGBoost: -) Import Libraries 7 Load date 120 1771 1 1 1 1 1 1 -) Preprocess data -) Split data -) Train mode/ - Compare Model -> Result taragraph-3:-Pseudo code for Support Vector Machine (sum)! -) Import libraries -) Process the obto -) Split the dataset into teatures -> Compute Models -> Update Weights -) Compare Nodes > Result

Paragraph-4:	
Testing Setup:	
-) Data Reparation	
> Feature Engineering	
-> Data Splitting	
Model Training	
-> class Validation	- Alignet library
-> Comparision	
Data Collection: * Kaggle * IFFF Explo	ber who may a
Results & Discussion!-	1.00 ( 3.3. a last)
Aperformance: XGBoost and SVM have show	on comparable accuracy
i'n predictive tasks	Vir Anning
-) Stability: XGBoost models tend to be on handling large datasets effectively.	none stable and efficient
Limitations!	
-> Data Specifically	100
-) Model Interpretability	Simple Hunnies
Future Scope ?	- lieure. the ist
- Marih-Copriti Research	ishippo of the in-
Future Scope:	eland shoped c.
-) Real-Time Applications	Dept sign
/ real 11.11 / 17/	
	sting sides in
Conclusion :- Evaluating the precision of	- X6Boot and
Conclusion: — Evaluating the precision of support vector machines in derecasting job	rescisión is essential
for improving workfore stability and	plaming.

<b>Group Statis</b>	tics				
	GROUP	N	Mean	Std. Deviation	Std. Error Mean
ACCURACY	XGB	10	96.2930	2.31289	.73140
	SVM	10	94.7200	.76056	.24051

ndent Samples	1621								
	Levene's Test for Equality of Variances								
	F	Sig.	t df	df	Sig. (2- talled )	Mean Differ ence	Error Differ ence	Confidence Interval of the Difference	
								Lower	Upper
ACCU Equal RACY variances	15.97 0	.001	2.0 43	18	.056	1.573 00	.7699 3	.0445 6	3.190 56
Equal variances			2.0 43	10. 924	.066	1.573 00	.7699 3	- .1230 4	3.269 04
	variances assumed Equal	Equal 15.97 variances assumed Equal variances	for Equality of Variances  F Sig.  Equal 15.97 001 variances assumed  Equal variances	for Equality of Variances  F Sig. t  Equal 15.97 001 2.0 43 assumed  Equal variances 2.0 43	for Equality of Variances  F Sig. t df  Equal variances assumed  15.97 .001 2.0 18 43 43 43 Equal variances 43 924	For Equality of Variances   F   Sig.   t   df   (2-tailed   )	F   Sig.   t   df   Sig.   Mean   Oiffer	F   Sig.   t   df   Sig.   Mean   Differ   Error   Differ   ence	F   Sig.   t   df   Sig.   Mean   Std.   Confide   Interval   Differ ence   Differ ence   Differ ence   Differ ence   Sig.   Differ ence   D



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