



Model	Tuned Hyperparameters	Optimal Values
Decision Tree	-	-





Random	-		-		
Forest					
Model Optimization and Tuning Phase Report					
Date		20 June 2024			
Team ID		739723			
Project Title		Rain fall prediction using ml			
Maximum Marks		10 Marks			
Maximum Mar	ks	10 Mark	CS		
	ks ation and Tuning Phase	10 Mark	TS .		
Model Optimization regularization, and	ation and Tuning Phase n phase, we fine-tuned hyperparan	neters usir	ng Grid and Random Search, applied tion ensured robustness, leading to		
Model Optimization In the optimization regularization, and improved model provided in the control of the contro	ation and Tuning Phase n phase, we fine-tuned hyperparan d enhanced feature engineering. Cr	neters usir oss-valida	ng Grid and Random Search, applied		
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Gradient	_	<u> </u> _	
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Boosting			
Performance M	etrics	Comparison Report (2 Marks):	
Model			
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Decision Tree		-	
Decision free			
D 1 F 4			
Random Forest		-	
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KNN	-
Gradient Boosting	-

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Gradient Boosting	For our project, Gradient Boosting improved predictions through iterative boosting of weak learners. We optimized hyperparameters like n_estimators and learning_rate, achieving high accuracy and robustness in rainfall forecasts.