



# ➤ PEST DETECTION

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**(ON KCC DATASET)**

By Varyam & Sajal  
PEC, CHD

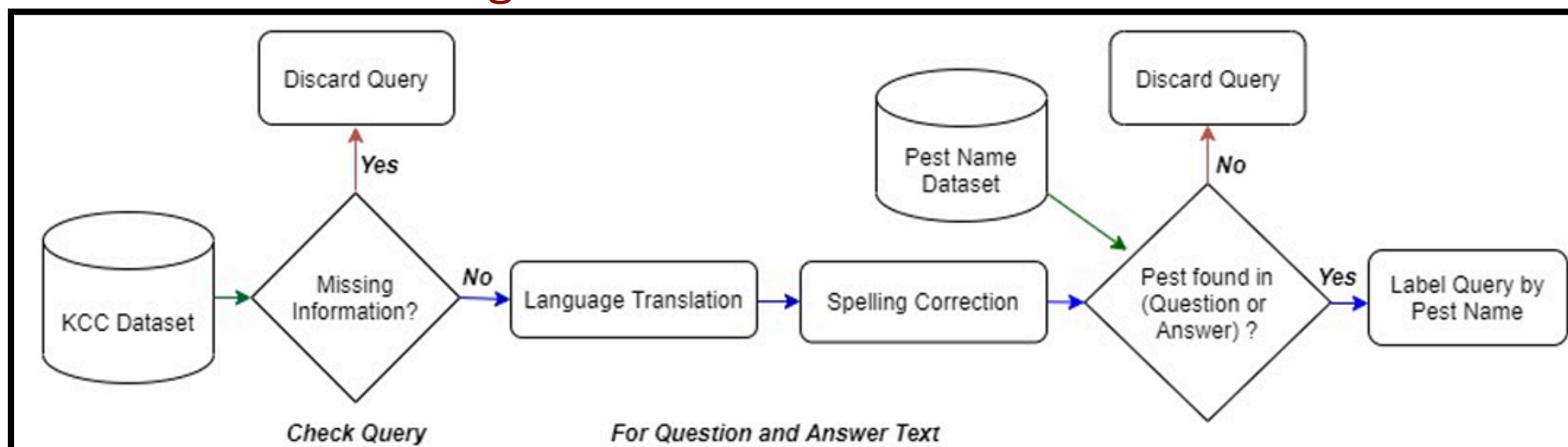
# About the dataset

- Examined crowdsourced data recorded from farmer call centers, popularly know as 'Kisan call centers' (KCC) managed by Ministry of Agriculture, Government of India
- KCCs have been established throughout India to inform and advise farmers on the queries posed by them and proved to be efficient as 61.5% of farmers depend on KCC for information support on various agricultural issues
- This big data consists of agricultural queries and can be used for investigating various problems faced by farmers

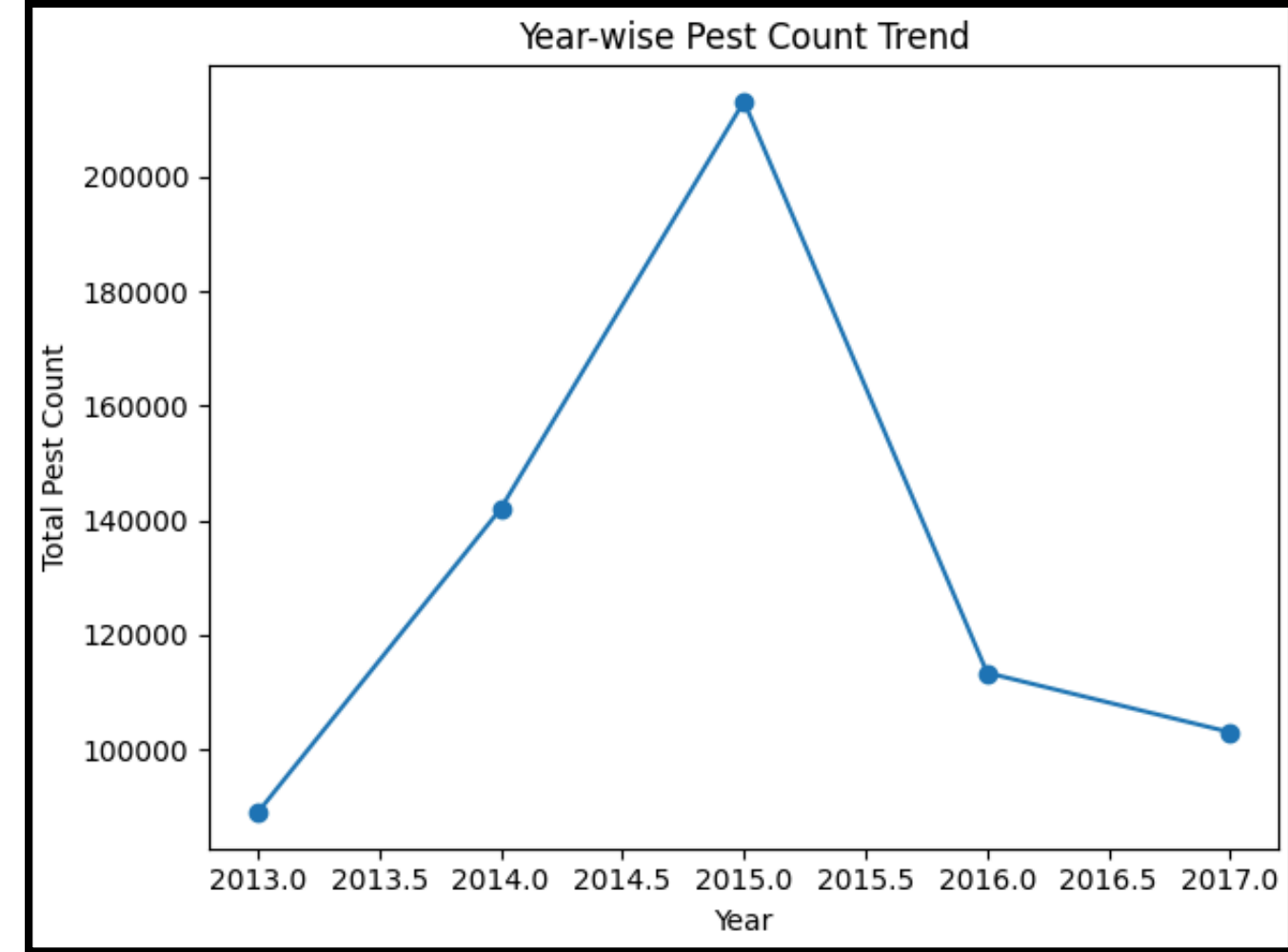
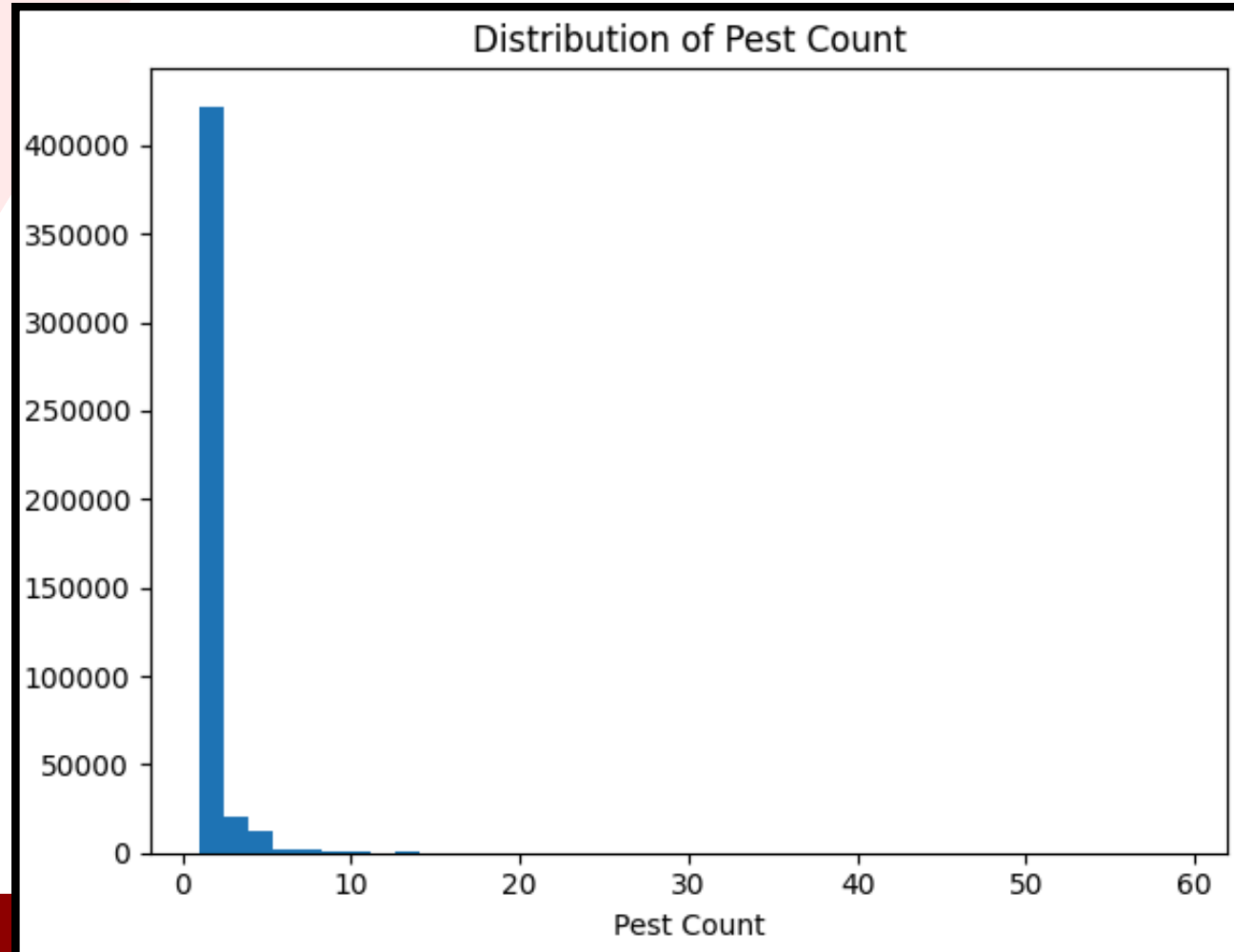
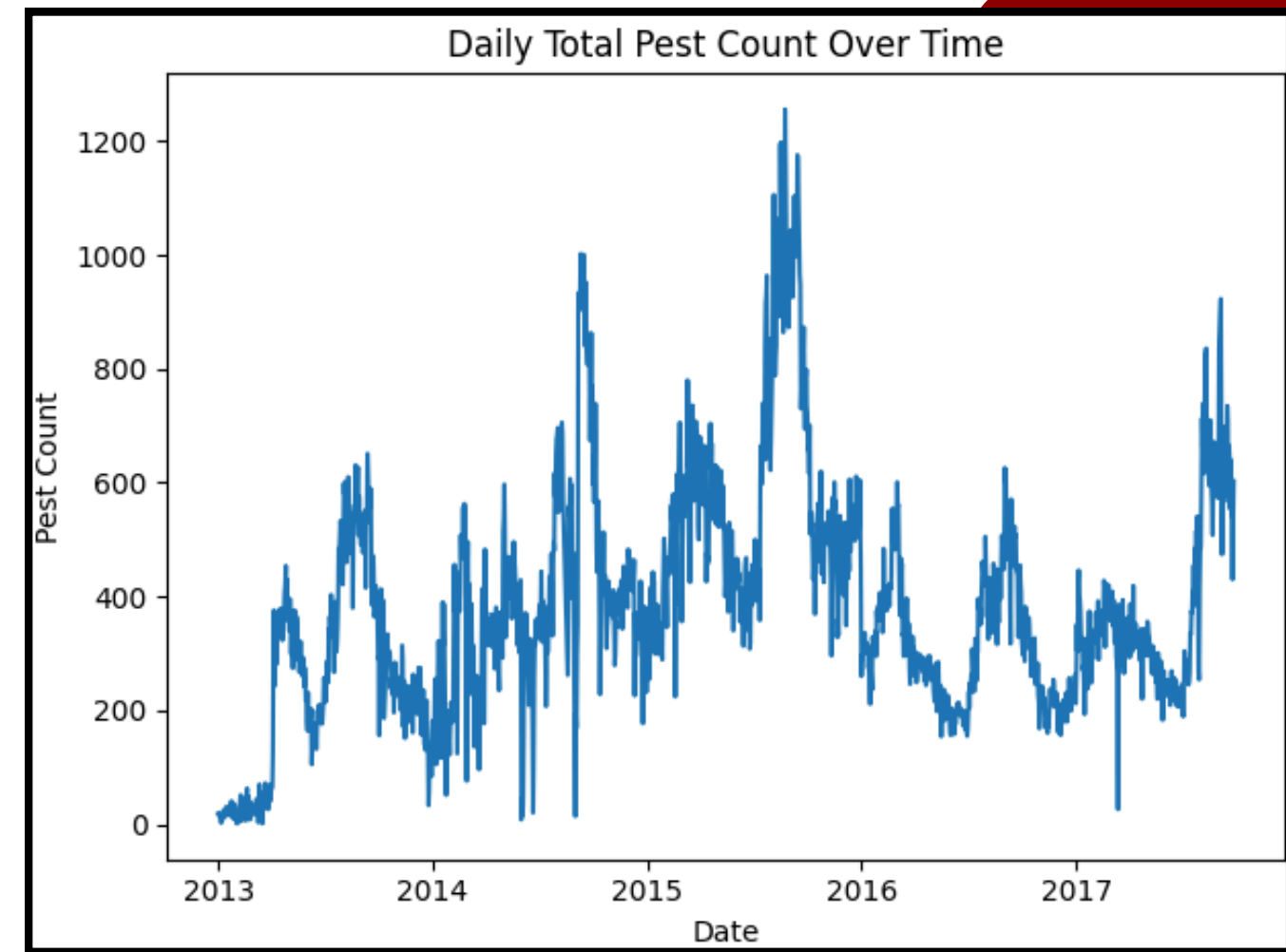
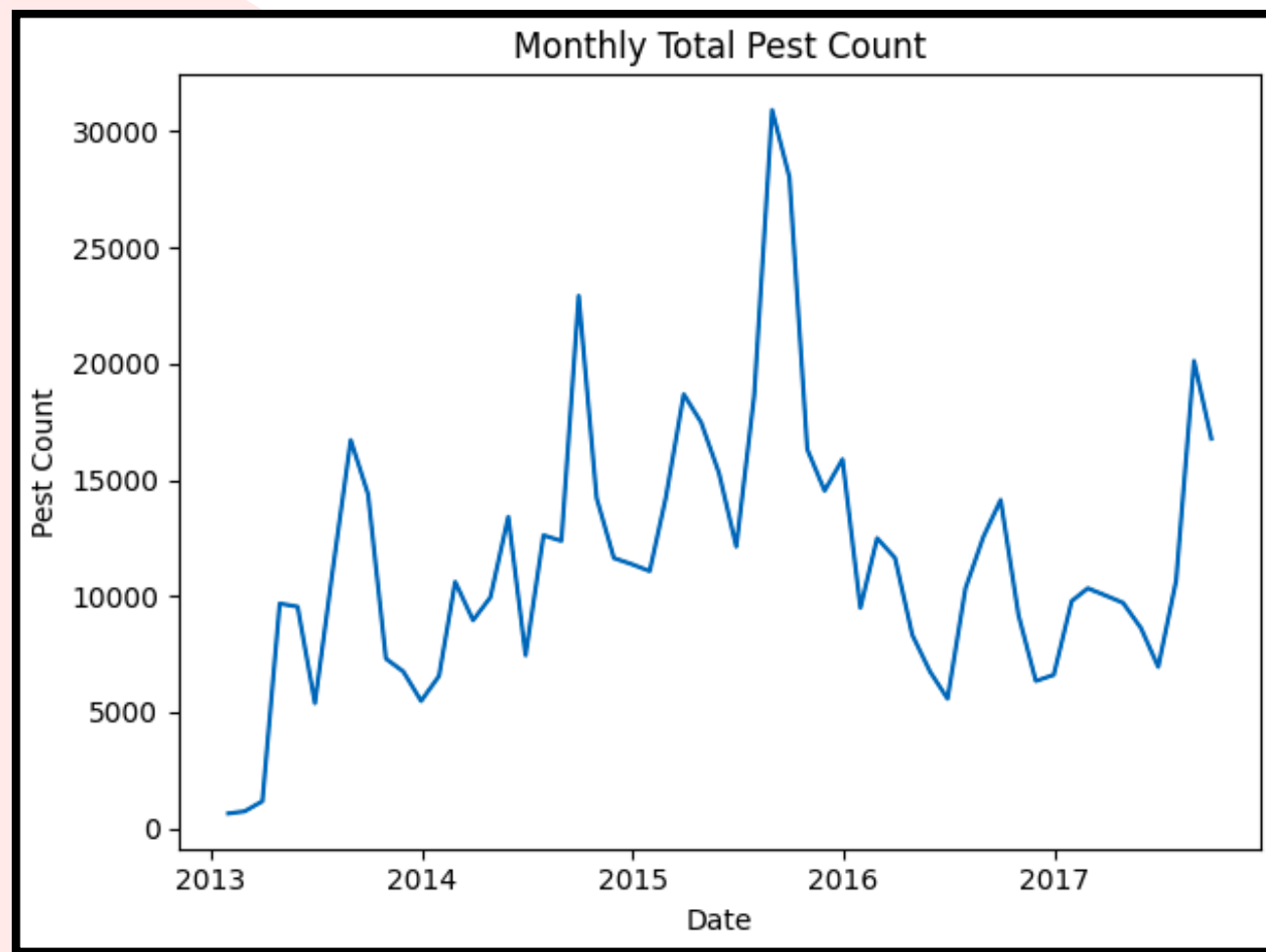
Season	Sector	Category	Crop	Query Type	Query Text
RABI	AGRICULTURE	Pulses	Black Gram (urd bean)	Plant Protection	pod borer in black gram
KCC Ans		State Name	District Name	Block Name	Created On
recommended for spray quinalphos 2ml /liter		TAMILNADU	TIRUCHIRAPPALLI	PULLAMBADI	2015-03-14 15:35:05.087

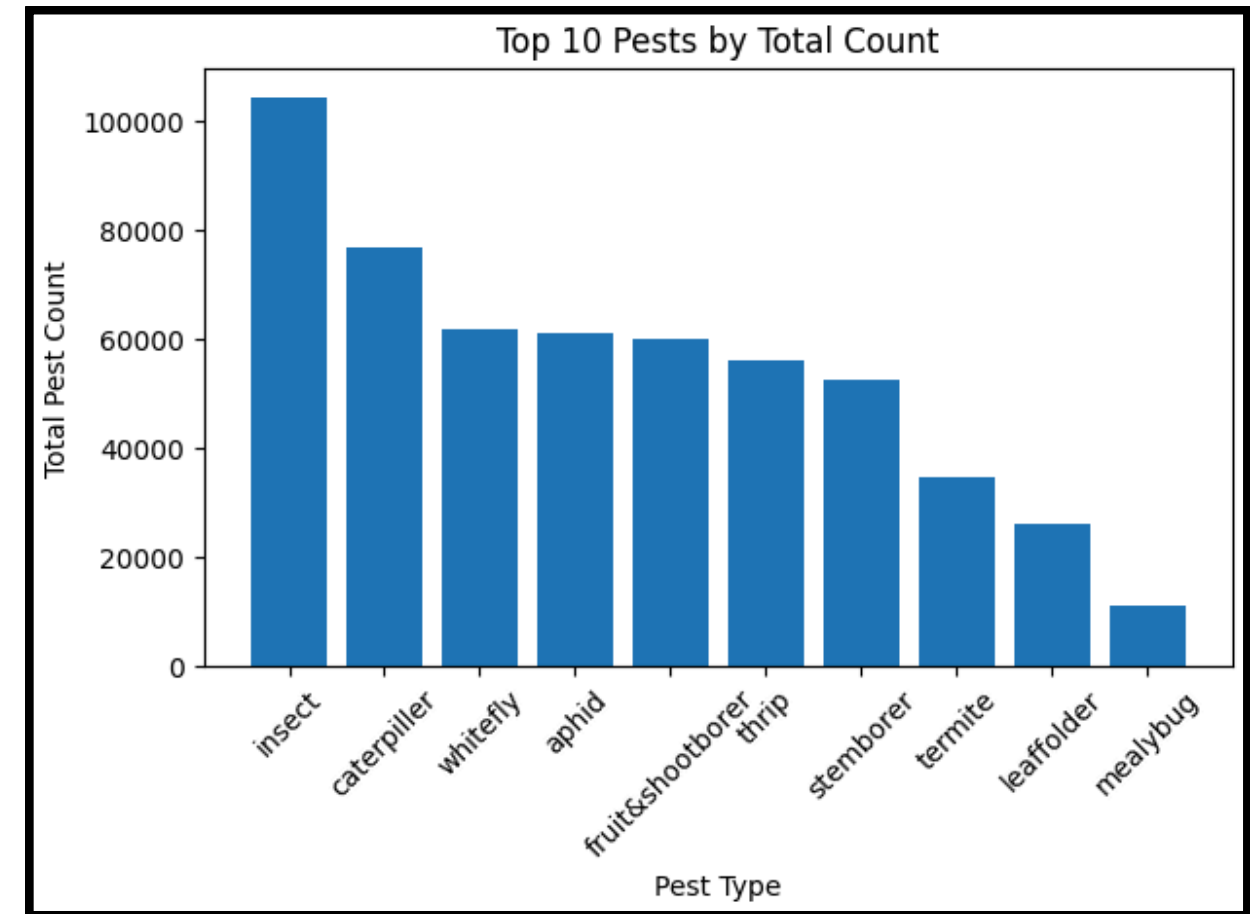
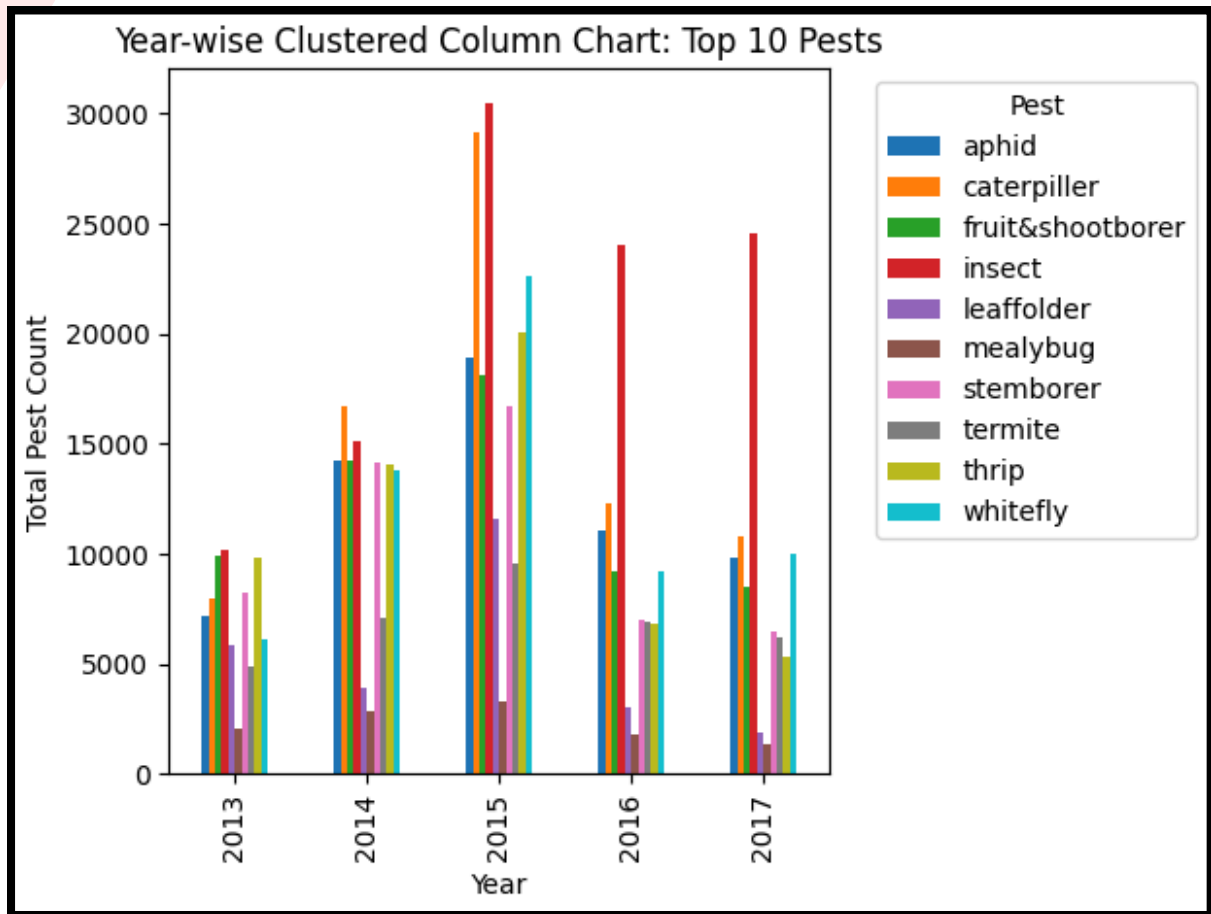
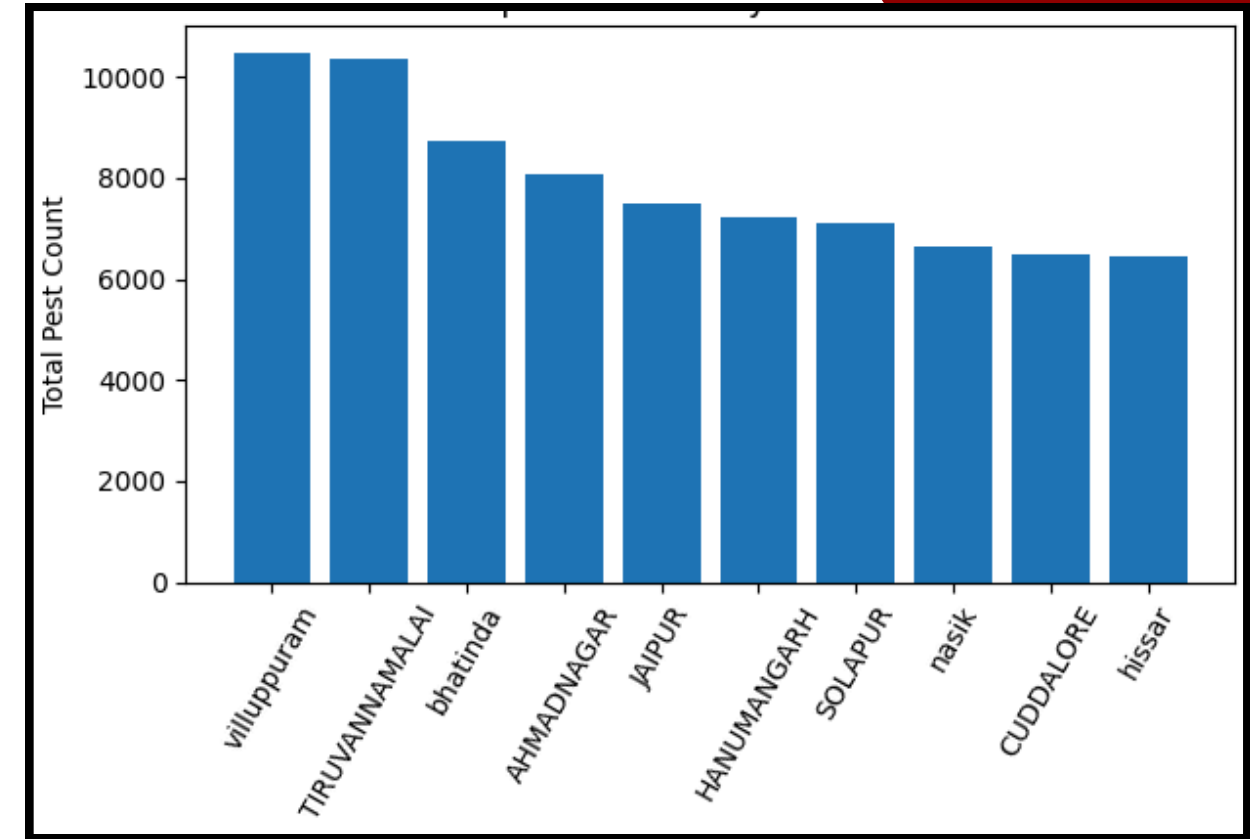
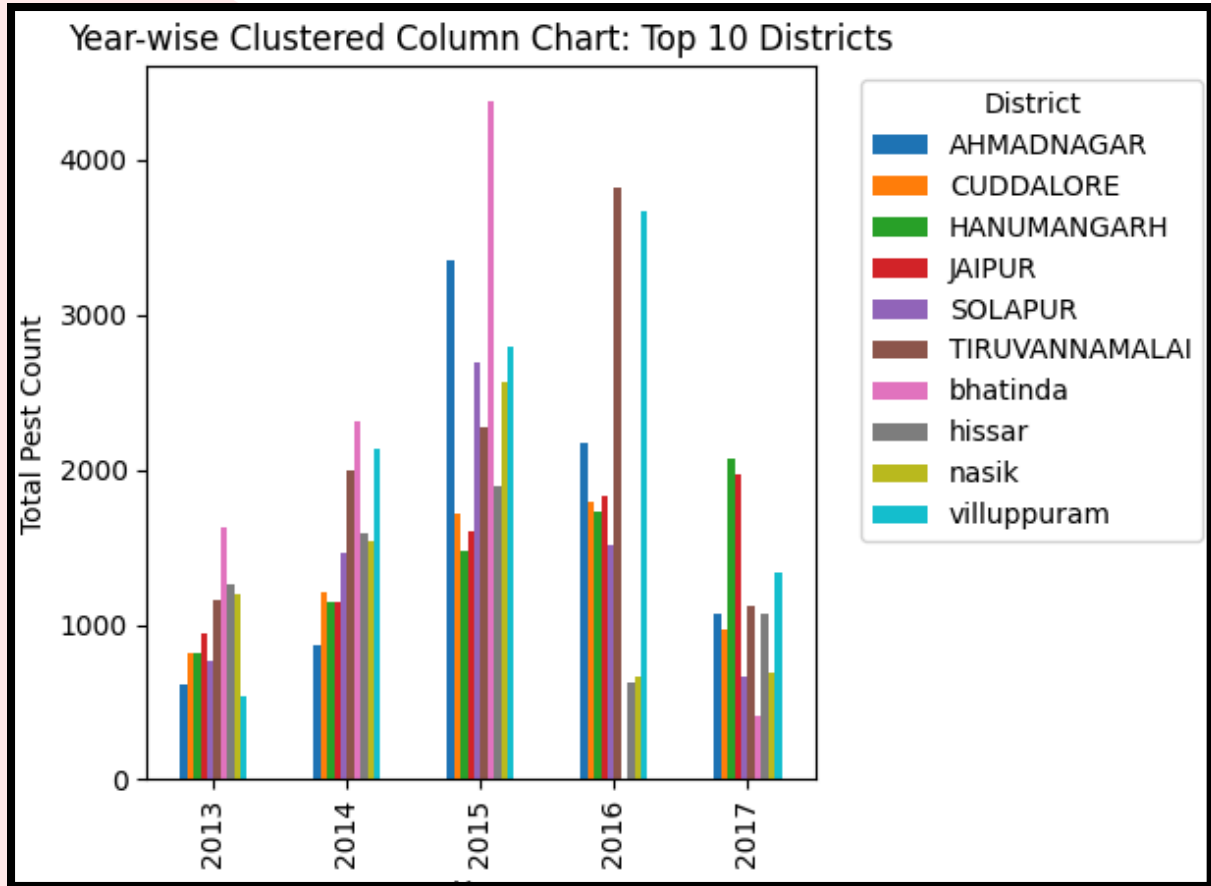
An example of Kisan Call Center (KCC) data. It consists of 11 different fields

- But we have been given the cleaned dataset and the dataset cleaning was done as below

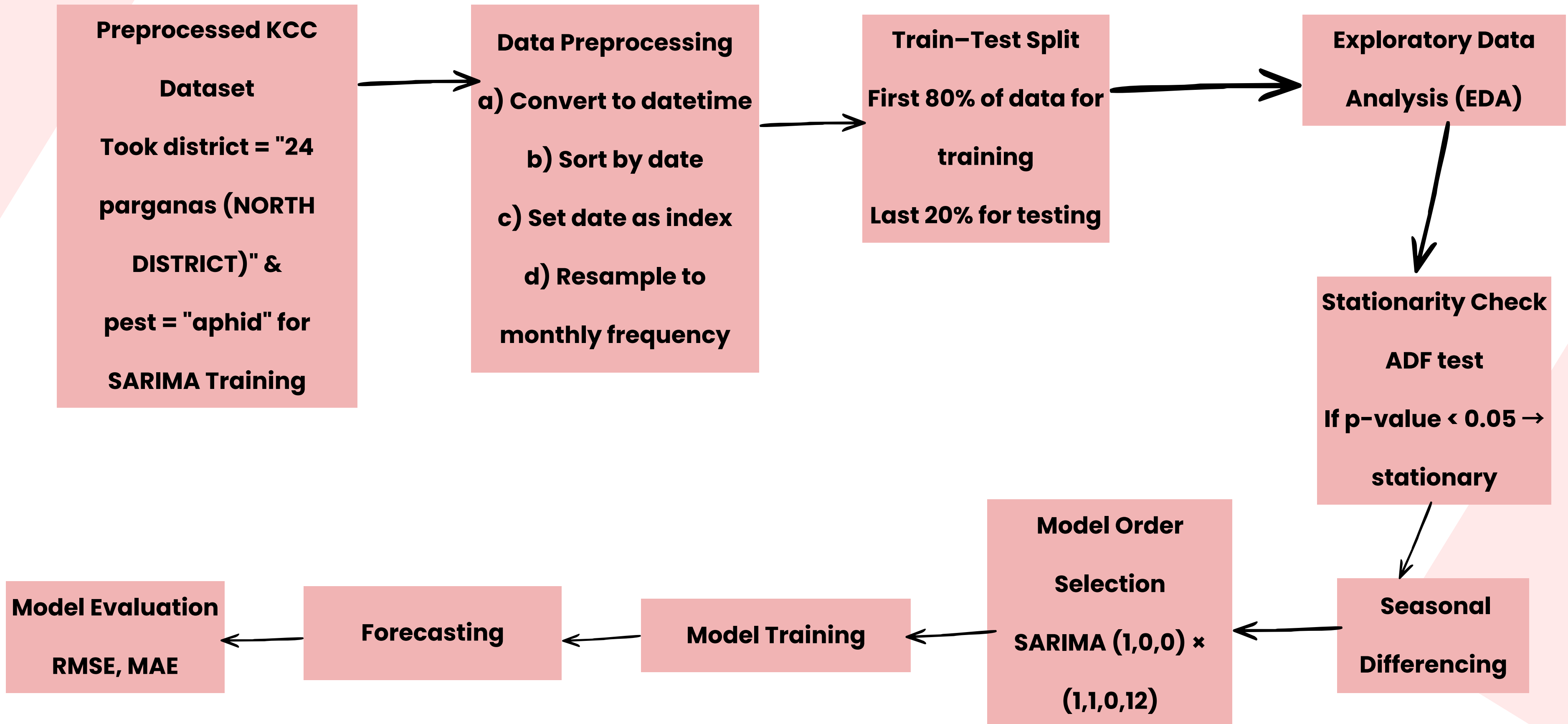


Flowchart for labelling pest queries





# SARIMA MODEL PIPELINE

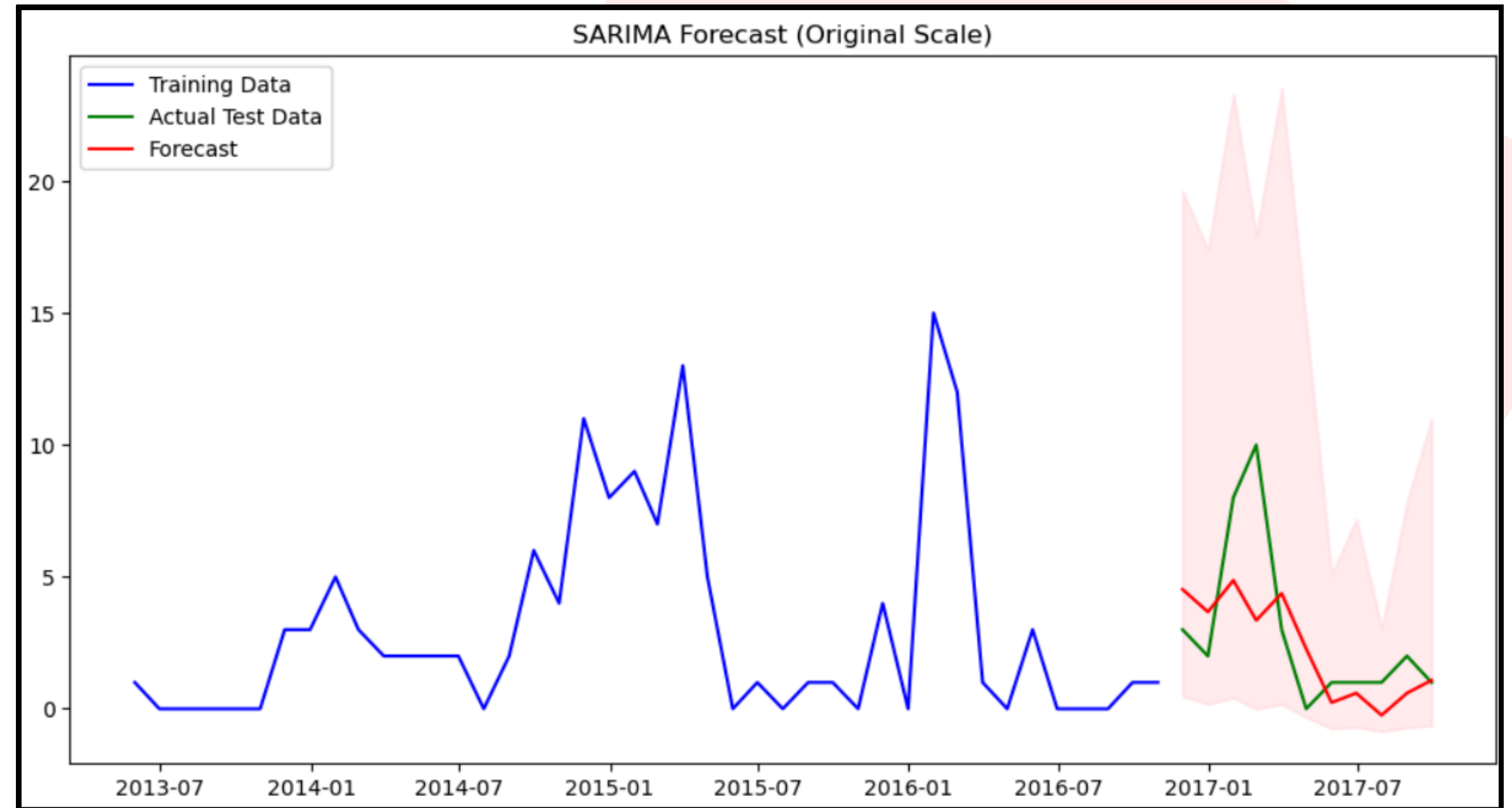


# MODEL RESULTS

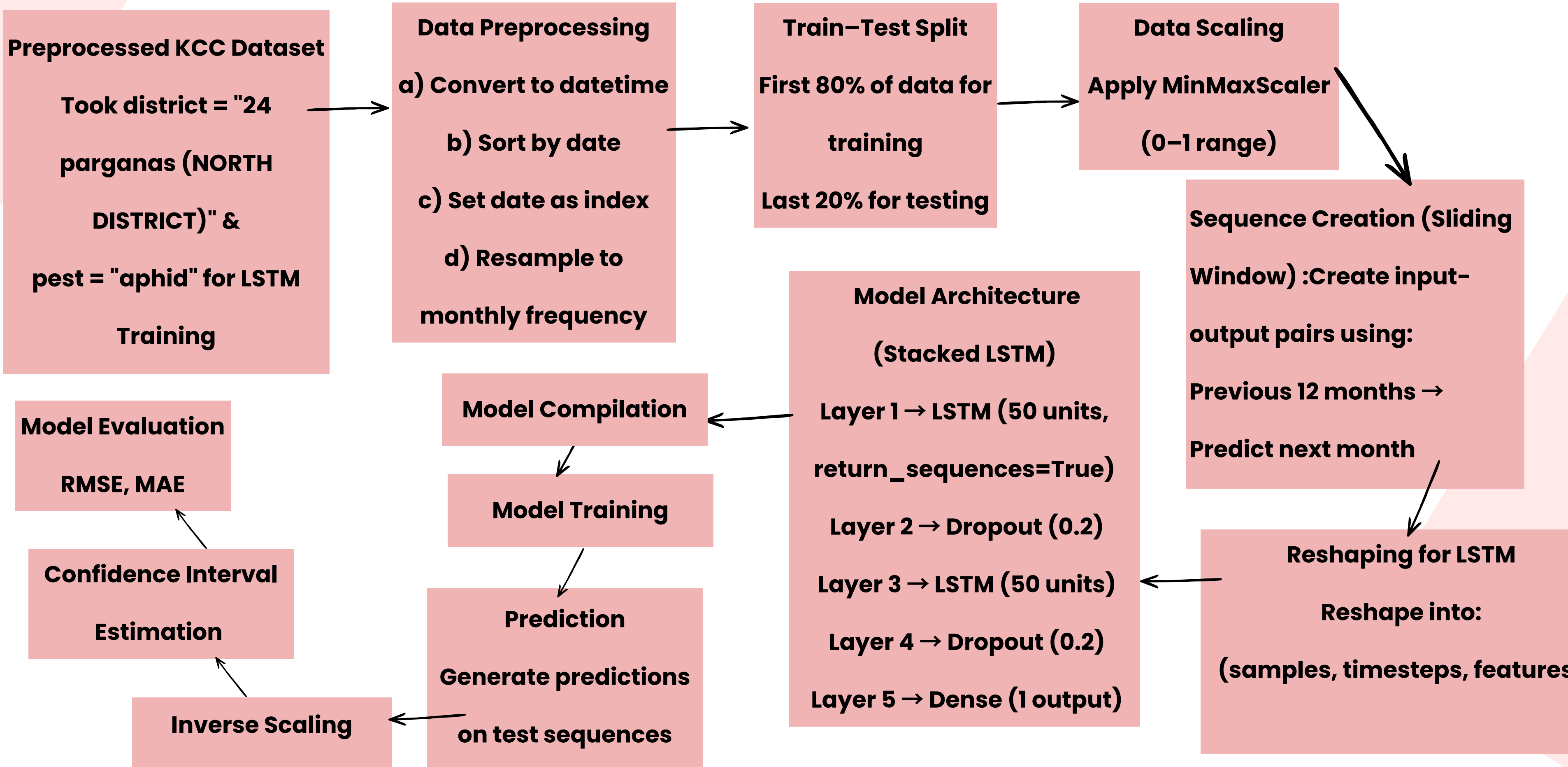
**RMSE : 2.53**

**MAE : 1.86**

**R2 : 0.30**



# LSTM MODEL PIPELINE



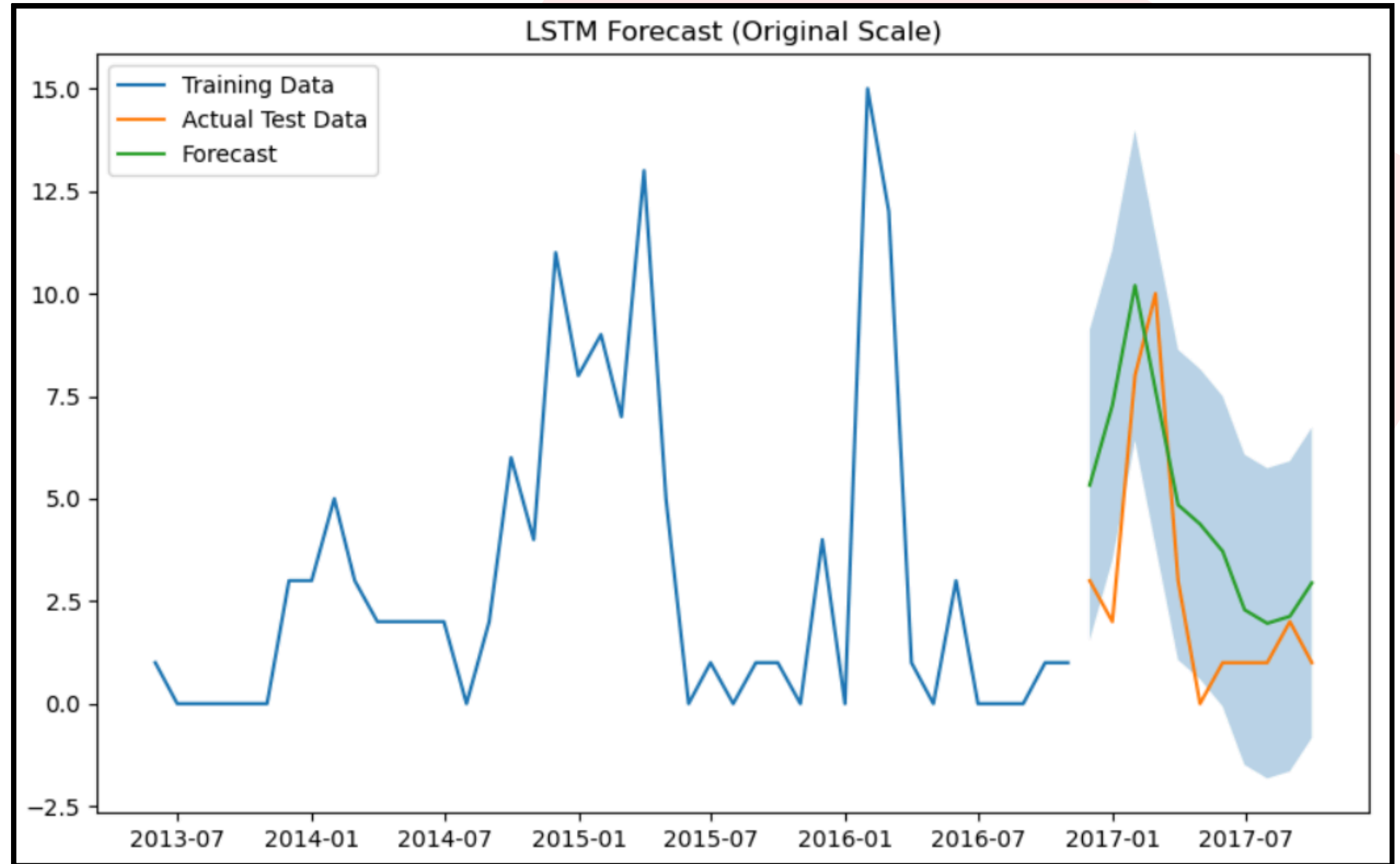


# MODEL RESULTS

**RMSE: 2.69**

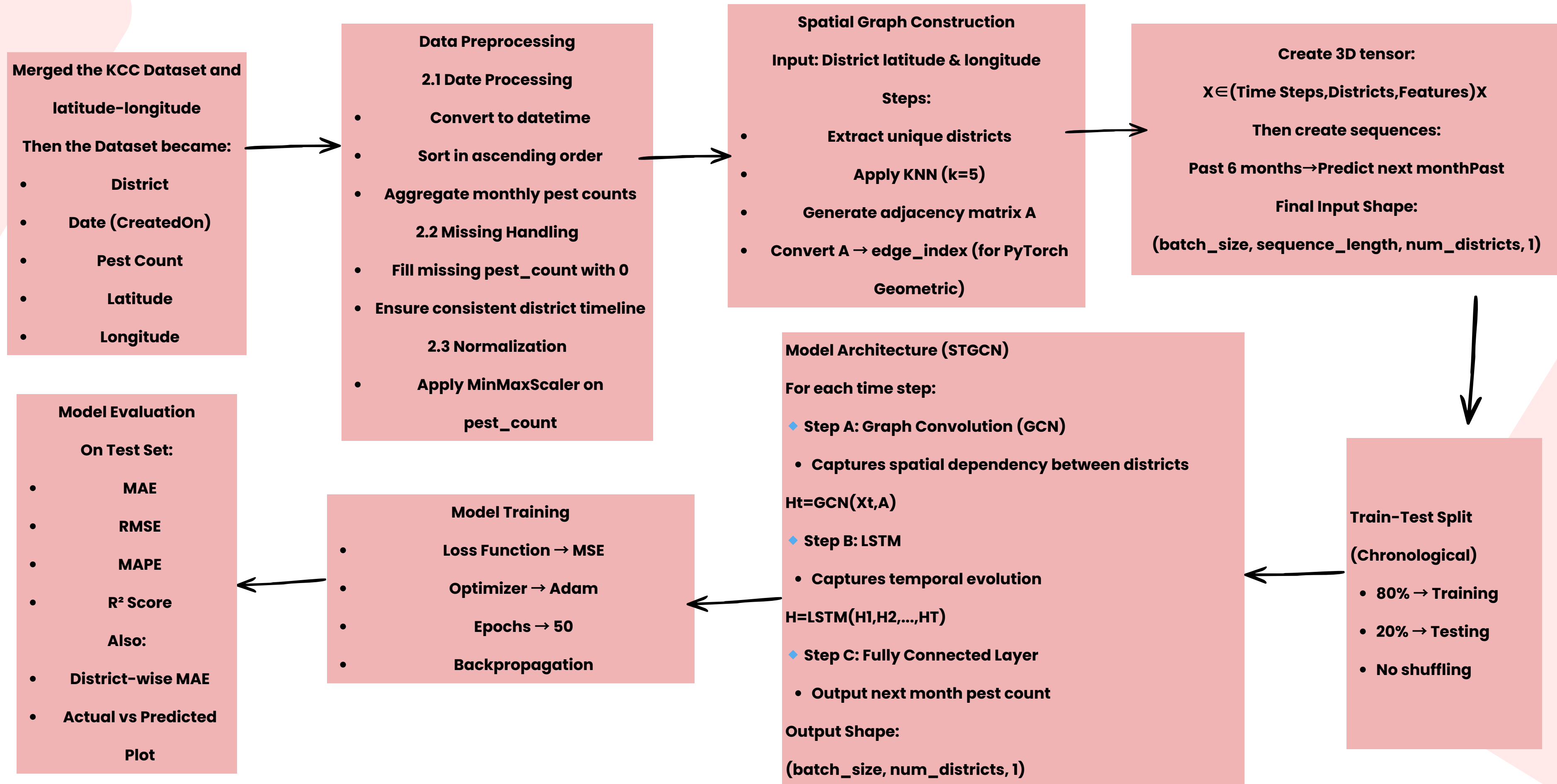
**MAE: 2.31**

**R2 Score: 0.20**





# SPATIO-TEMPORAL MODEL PIPELINE

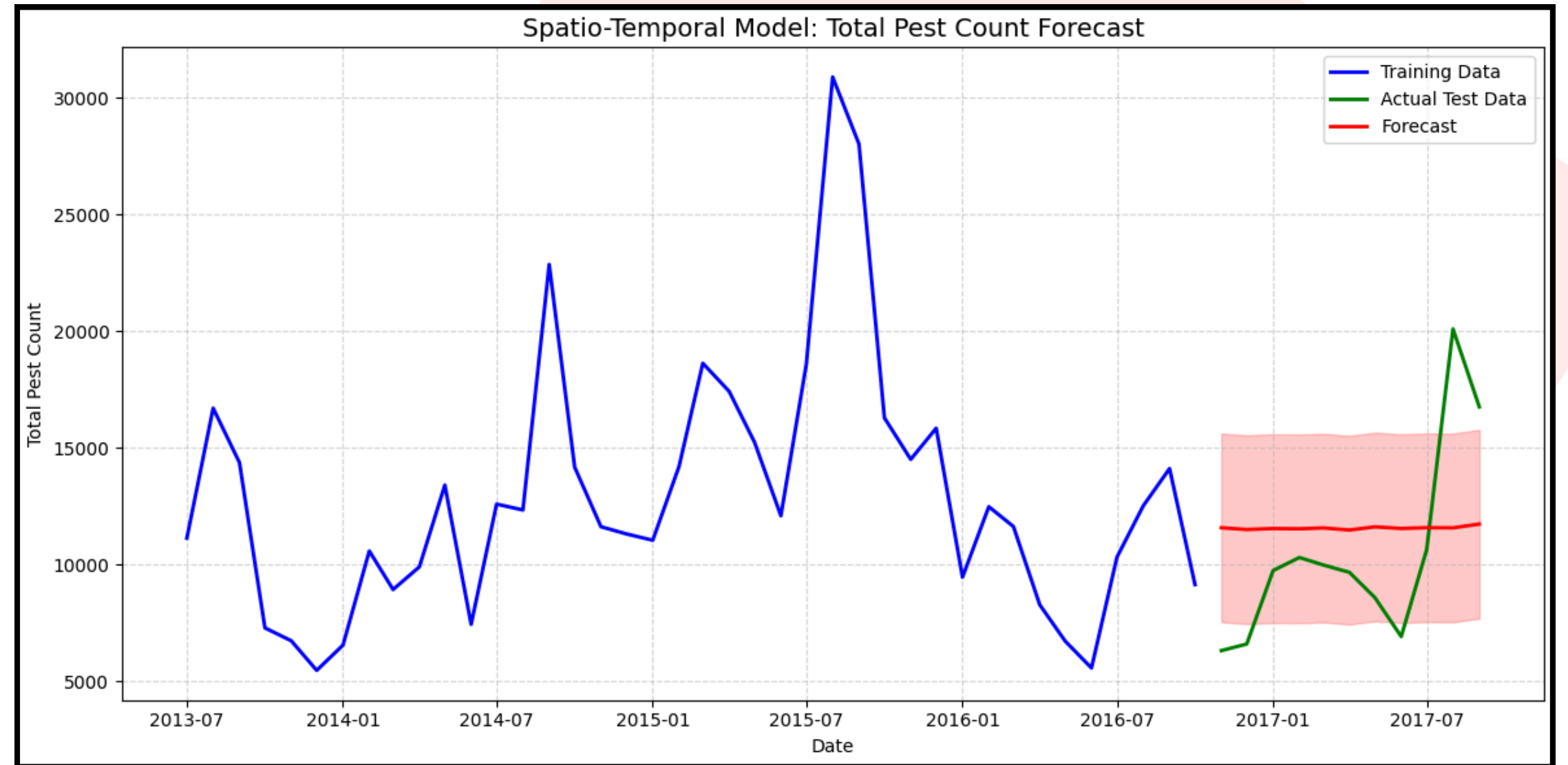


# MODEL RESULTS

**RMSE: 38.35**

**MAE: 18.14**

**R2 Score: 0.22**



The background features two large, light pink geometric shapes. One is a triangle on the left side, and the other is a larger, more complex shape on the right side, both pointing towards the center.

**THANK YOU**