

# NEWSLETTER

Combining parts to make a new whole

Create

Judging the value of information or ideas

Evaluate

Breaking down information into component parts

Analyze

Applying the facts, rules, concepts, and ideas

Apply

Understanding what the facts mean

Understand

Recognizing and recalling facts

Remember

## About the Newsletter

Welcome to our vibrant weekly newsletter – your dedicated source for connection, inspiration, and skill-building! Immerse yourself in our curated content, featuring insightful updates, expert perspectives, and some nifty tips and tricks in Data Analytics, accompanied by comprehensive course notes. Join us in making this newsletter a dynamic space where information meets inspiration, creating a rich learning experience for all of us.

Best regards.



## Upcoming Events

Date	Events
17th Apr' 24	Ram Navami
20th Apr' 24	TY & Final Year Teaching End
21st Apr' 24	Mahavir Jayanti
22nd Apr' 24	Earth Day
25th Apr' 24	TY & Final Year Practical Exam



## Announcement and Activities

Students from the School of Civil Engineering had a Education tour to Atal Tunnel Rohtang .



## Guest of the Week



Dr. Samir Nanivadekar, with over 6 years of industry experience and 18 years of teaching at University of Mumbai affiliated institutes, currently serves as Associate Professor and Dean Administration at Parshnavath Charitable Trust's A.P

### Unveiling ChatGPT: A Companion for Data Analysis

In the ever-evolving realm of data science, the advent of artificial intelligence (AI) tools like ChatGPT heralds a significant transformation. ChatGPT, with its conversational prowess, isn't just a chatbot but a multi-faceted tool that can be leveraged for a myriad of data analysis tasks.

### Understanding ChatGPT's Capabilities

At its core, ChatGPT is an AI model developed by OpenAI, trained on diverse datasets to understand and generate human-like text. This capability makes it an excellent assistant for data analysis, as it can:

### Practical Steps for Leveraging ChatGPT in Data Analysis

**Define your objective:** Clearly articulate what you aim to achieve with your data analysis. This clarity will help ChatGPT provide more targeted assistance.

**Prepare your data:** Ensure your data is accessible in a structured format. While ChatGPT cannot directly manipulate data files, it can guide you on how to prepare your data.

**Interact with specificity:** When asking ChatGPT for help, be as specific as possible. Detailed queries yield more accurate and useful responses.

**Iterate on feedback:** Use ChatGPT's suggestions to refine your analysis process, iteratively improving your queries and methods based on its feedback.

### Limitations and Considerations

While ChatGPT is a powerful tool, it's crucial to remember its limitations. It does not have the capability to directly interact with databases or perform computations. Thus, analysts must apply the generated insights manually. Additionally, ChatGPT's knowledge is up to a certain point in time, so staying updated with the latest data analysis trends and tools is essential.

## This Week includes



**Mr. Swapnil V. Gole**  
 (Final Year BTech)



**Ms. Shraddha S. Gadge**  
 (TY BTech)

### Regression Analysis:

Regression analysis is a statistical method used to examine the relationship between one dependent variable and one or more independent variables.

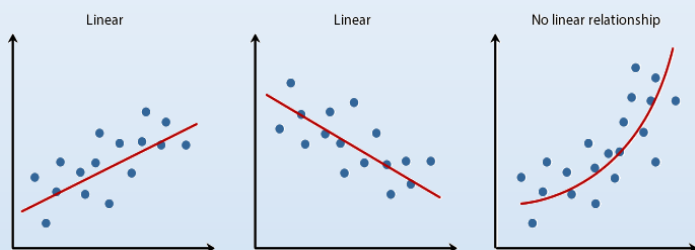
#### Linear Regression:

- 1. Data:** Organize data with independent and dependent variables.
- 2. Scatter Plot:** Create a scatter plot.
- 3. Trendline:** Add a linear trendline to the chart.
- 4. Equation & R-squared:** Display the regression equation and goodness of fit on the chart.

#### Non-linear Regression:

Non-linear regression models use non-linear equations to describe the relationship, like exponential or polynomial functions.

- 1. Data:** Same as linear.
- 2. Scatter Plot:** Create a scatter plot.
- 3. Trendline:** Add the appropriate non-linear trendline.
- 4. Equation & R-squared:** Display the equation and goodness of fit.



### Achievements

Mr. Paras Singh, a SY BTech student, has accomplished the Super 30 Full Stack Development + DSA Training program with success. This achievement marks a pivotal milestone in his academic journey, equipping him with valuable skills for future endeavors in the field.



### Validating Trendline Equation for Large Data:

- 1. Residual Analysis:** Plot the residuals to check for patterns. In a good model, residuals should be randomly scattered around zero.
- 2. Cross-validation:** Split your data into training and testing sets. Fit the model on the training set and validate it on the testing set to assess its predictive accuracy.
- 3. Out-of-sample Prediction:** Use the trendline equation to predict values for new data points not included in the original dataset compare them with the actual values to evaluate the model's performance.

### Displaying Trendline equation and goodness of fit:

- 1. Input Your Data:** Enter your data into two columns in an Excel worksheet, with one column for the independent variable (X) and another column for the dependent variable (Y).
- 2. Create a Scatter Plot:** Select your data, Go to the "Insert" tab on the Excel ribbon., Click on "Scatter" and choose a scatter plot type.
- 3. Add a Trendline:** Right-click on any data point on the plot.
  - In the "Format Trendline" pane that appears on the right, choose the desired type of trendline (linear, polynomial, etc.).
- 4. Display Equation and R-squared Value:**
  - Right-click on the trendline on the plot.
  - Select "Format Trendline Label" from the context menu.
  - Check the boxes for "Display Equation on chart" and "Display R-squared value on chart."



### Tips of the Week

Hello Excel enthusiasts! We've gathered essential Excel formulas to elevate your spreadsheet game. These formulas are your secret weapons for efficient data handling and analysis.

(QR Code for Excel-VBA Editor)

