

Project title: Tesla Social Media Analytics for Strategic Branding

Project Overview:

You are hired as a Data Analyst by Tesla, a global leader in electric vehicles, energy storage, and clean energy solutions, with a strong presence on platforms like Twitter (X), Instagram, YouTube, and LinkedIn.

Over the past year, Tesla has expanded its digital marketing initiatives, showcasing new vehicle launches (Cybertruck, Model S updates), software/autopilot innovations, and sustainable energy solutions. The company invests heavily in content-driven campaigns to:

- Boost brand engagement
- Educate consumers about EV adoption & clean energy
- Strengthen customer loyalty
- Maximize ROI from digital ad spend

However, the marketing team is struggling to align campaigns with measurable outcomes. They need clarity on:

- Which content resonates most with Tesla's audience?
- The ROI of advertising spend across platforms
- How product launches and campaigns influence follower growth?
- What strategies improve community loyalty and advocacy?

Project Objective:

Build a complete Social Media Intelligence Solution in Excel that consolidates Tesla's raw data into business insights, answering strategic questions and empowering Tesla's digital team to make data-driven marketing decisions.

(If you're unfamiliar with domain-specific terms, feel free to take the help of Google or AI tools like ChatGPT or Gemini to understand them better and apply them effectively in your project.)

Dataset Description: [Tesla Marketing Dataset](#)

(Please refrain from using AI to perform the tasks mentioned below, as it will only provide generic solutions.)

1. Posts Dataset

- Contains individual Tesla posts across platforms.
- Used for content performance, engagement analysis, and hashtag effectiveness.
- Example fields: PostID, Platform, Date, ContentType (Video, Image, Tweet, Carousel), Hashtags, Likes, Shares, Comments, Clicks, Impressions.

2. Engagement Summary Dataset

- Aggregated weekly dataset tracking platform-level performance.
- Helps evaluate follower growth, ad spend effectiveness, engagement trends.
- Example fields: Week, Platform, Followers_Gained, Ad_Spend, Total_Engagement.

3. Campaign Metadata Dataset

- Information about Tesla campaigns (e.g., Cybertruck Launch, FSD Beta Rollout, Sustainability Awareness).
- Tracks campaign objectives, spend, impressions, engagement uplift.

Tasks

Task 1: Data Preprocessing & Cleaning (12 Marks)

- Remove duplicate Tesla posts.
- Standardize date & platform names.
- Format numeric columns (Likes, Reach, Impressions, Ad Spend).
- Split hashtags (e.g., #Cybertruck, #EVRevolution, #TeslaEnergy) into individual tags.

Task 2: Engagement Analysis (8 Marks)

Using the **Posts Dataset**:

- Calculate average engagement rate per platform:
$$\text{Engagement Rate} = (\text{Likes} + \text{Shares} + \text{Comments}) / \text{Impressions}$$
- Identify Top 10 Tesla posts with highest engagement.
- Create a pivot table showing:
 - Total Likes, Shares, Comments by Content Type & Platform
 - Average Clicks per post by Hashtag
- Highlight top-performing hashtags (#Cybertruck, #ModelY, #EVAoption, etc.).

Task 3: Platform Analysis (12 Marks)

- Identify the platform with highest engagement (e.g., Twitter for announcements vs. YouTube for product demos).
- Compare follower growth rates across platforms.
- Visualize Engagement vs. Ad Spend per platform.
- Advise: Should Tesla focus on Twitter + YouTube (product announcements + demos) or maintain a multi-platform strategy?

Task 4: Hashtag & Content Strategy (16 Marks)

- Identify most frequently used Tesla hashtags.
- Compare average performance of posts containing each hashtag.
- Compare content performance:
 - Videos (product demos, Elon talks)
 - Images (car designs, interiors)
 - Carousels (features, comparisons)
- Recommend content type priorities per platform (e.g., videos on YouTube, car images on Instagram).

Task 5: Campaign Effectiveness (16 Marks)

- Calculate:
 - Total & Average Impressions, Likes, Clicks per Campaign.
 - Engagement uplift during vs. before campaigns (e.g., Cybertruck launch spike).
- Insights:
 - Which campaign had the highest ROI (engagement vs. spend)?
 - Which campaign drove the strongest follower growth?

Task 6: Follower Retention & Loyalty (16 Marks)

- Visualize weekly follower growth per platform (line chart).
- Identify the peak week of follower gain.
- Use moving averages to smooth growth trends.
- Correlate ad spend vs. follower growth using scatter plots.

Task 7: Video explanation: Expressing the finding and actionable insights (20 Marks)

(The summary should be in your own words and must NOT be generated using AI. Please don't write a script and read it aloud. Marks will be deducted for doing so.)

Summarize the key findings and provide concrete, data-backed recommendations for improving Tesla social media marketing strategies, campaign planning, content performance, and platform-specific ROI.

Note:

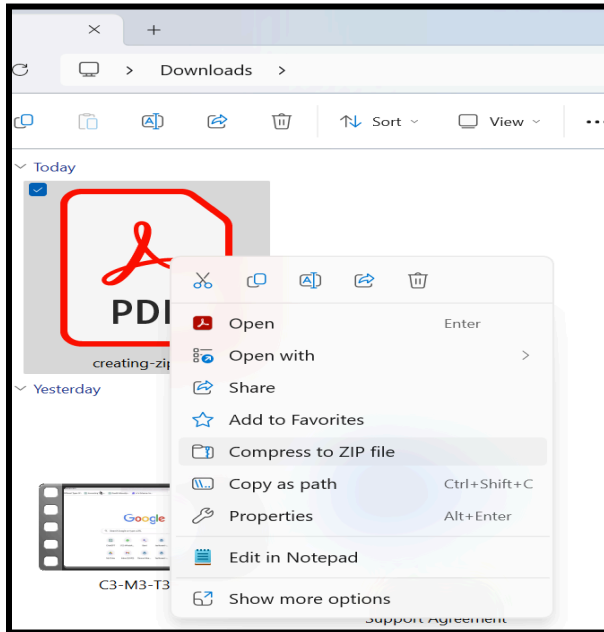
- Please note that, if the student sets their own criteria, they need to clearly mention and explain it. Marks will be given according to the specified criteria if they are acceptable.
- Please do all the tasks in different workbooks for clarity and visibility.
- Plagiarism will result in a penalty, including possible project disqualification.
- The project will be evaluated based on the quality of analysis, depth of insights, and feasibility of recommendations.

Submission Guidelines:

- Save the worksheets in a folder and then convert it into a zipped (.zip) folder. **(Please note, the drivelink for the video created should also be added in the sheet itself.)**
- Upload the zipped folder on your respective dashboard.
- Failure to comply with submission guidelines will result in no grading/0 marks.

How to ZIP a PDF file:

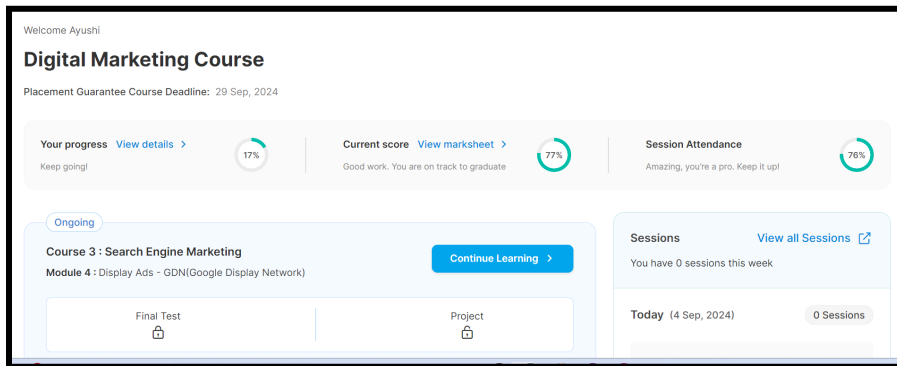
- Put all of the worksheets you want to compress (or just one) into a new folder.
- Right click on that folder.



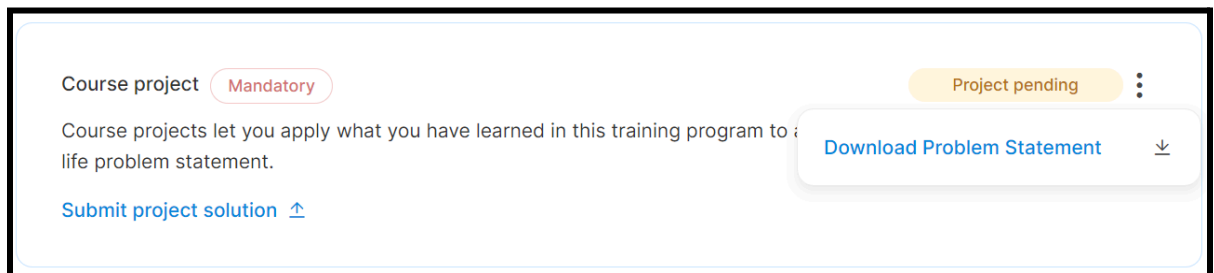
- Select the “Compress to ZIP file” option and then click “Compressed (Zipped) folder.”
- A new .ZIP file will be created that contains your document(s).

In order to submit the projects please follow the following steps:

1. Click on “Your progress [View details](#)” after logging into your dashboard.



- Next, click on the tab for the specific child course for which you want to download the problem statement. Then, scroll down to find the **"Course Project"** section.
- Now, click on the three dots on the right-hand side of the "Course Project" tab to select **"Download Problem Statement."**



- Please follow the guidelines (screenshot is shared below) provided in the project to ensure correct submissions. Then, click on **"Upload Project Solution"** to submit

your work.

Instructions for submission

✔ Submit your original work


✔ Ensure that all the details are included and checked thoroughly.

✔ Upload only one .Zip/.rar file(<40 MB) containing all files if there are multiple files.

✘ Do not submit the solution file downloaded from the internet. A plagiarism check will be performed on your submissions.

✘ Do not present a part or all of another student's work as your own.

If you fail to follow the instructions above, your submission will be discarded and you will be debarred from the placement guarantee course without any further notice

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