**Capstone Project Submission**

**Instructions:**

i) Please fill all the required information.

ii) Avoid grammatical errors.

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| **Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)** |
| **Team Consists of:** 1. Vridhi Parmar   * Contribution: EDA * E-mail: [vridhiparmar27@gmail.com](mailto:vridhiparmar27@gmail.com)   2. Pradip Solanki   * Contribution: EDA * E-mail: [solankipms@gmail.com](mailto:solankipms@gmail.com)   3. Hrithik Chourasia   * Contribution: Model building * E-mail: [hrithik@gmail.com](mailto:hrithik@gmail.com)   4. Ameen Attar   * Contribution: Generating data and predicting sales for next 6 weeks * E-mail: [ameen@gmail.com](mailto:ameen@gmail.com)   **Problem Statement:**  We were provided with historical sales data for 1,115 Rossmann stores and were asked to predict their daily sales for up to six weeks in advance.  **Approach:**  First we perform EDA on 2 datasets and then merged them into one dataset.  We have done some feature engineering, from promo2, promo2SinceYear and promo2SinceWeek got a single feature promo\_cont that have more useful information. We created CompetitionTime from CompetitionOpenSinceYear and CompetitionOpenSinceMonth.  We have log transformed the features and removed multicollinearity.  We have built Linear Regression Model and checked Assumptions for Linear Regression.  We also have applied regularization techniques like Lasso, Ridge and Elastic Net to Avoid Overfitting.  We also used Stacking to make predictions that have better performance than any single model.  Finally we generated data for last 6 weeks and tested prediction of that data from our model after that we generated data for next 6 weeks and perform prediction on that data.  **Conclusion:**  As per our model prediction we can conclude that the Total revenue of Predicted Sales in next 6 weeks will be: 250,776,406 euros By 1115 Rossmann stores. |
| **Please paste the drive link to your deliverables folder. Ensure that this folder consists of the project Colab notebook, project presentation and video.** |
| Google Drive link:  https://drive.google.com/drive/folders/15gHhpMfDmXxPxfWQ5sit0vaGXnCdyu6v?usp=sharing  GitHub link:  https://github.com/hrithikwel8/Rossmann\_Sales\_Prediction |