

Prediction of Optimum Digital Marketing Strategy

Group No. 11

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Presentation Topics

- The Analytics challenge
- Business Problem
- Business Data
- Modelling & Evaluation
- Challenges & Mitigation
- Keeping ahead of Competition
- Learnings & next steps

Analytics Challenge

- Domain Chosen
Digital Marketing
- Why this domain is important
With the fast-changing environment and the drive to maximize gains by utilizing modern technology and digital marketing tools, digital marketing has emerged as a key component of today's marketing.
- What kind of impact this domain has
Because it connects a firm with its clients when they are online and works in all industries, digital marketing is crucial. When companies appear on Google through SEO and PPC, on social media through social media marketing, and via email through email marketing, it connects them with ideal customers.
- Who are the leaders in your domain of choice
 - iProspect
 - Havas Media
 - Publicis Sapient
 - VML, LLC
 - RAPP
- How the leaders in your domain of choice maintains leadership
The prominent players in this industry are emphasizing on the adoption of advanced technologies such as Artificial Intelligence, Machine learning, and others.

Business Problem

- What are the Business Problems in your domain of choice and Why the problem is important and unique
Digital marketing is becoming the crucial aspect for every business. Choosing right digital marketing strategy will make a great difference in the company's overall performance. In our project we are trying to predict optimum digital marketing strategy for a company based on their business data.
- Who are the stakeholders which gets impacted by the problem
As the digital marketing is a part of the company's overall marketing strategy, and marketing plays the significant role in generating/increasing company's footprint which directly impacted the company's overall revenue growth. Hence, all the stakeholders and founding members of the company will be get impacted.
- The potential benefit of solving the business problem
Solving this problem will be beneficial significantly for the small and medium businesses (SME's), as they have the limited budget to spend on the marketing activities and choosing right kind of marketing strategy becomes more important.

Business Data

- The Data that relates to the problem(s)
 - Firsthand information is gathered from interviews conducted to collect data from employees in different SMEs. The researcher has conducted primary data collection process through interviews in order to understand the perspective of employees in SMEs and learn their companies' digital marketing and its role to earn ROI.
 - Historical data of adopted digital marketing strategy by the companies operated in various domains and their impact on the company's growth
- The source from where you can collect the data
 - The data will be collected through primary interviews and several secondary sources including the company's financials
- Challenges to solve while collecting data
 - The majority of our data will be gathered through primary research, which has its own set of drawbacks, including a time-consuming process and high costs.

Modelling & Evaluation

- The chosen business problem falls under the Supervised Machine Learning Multi-label classification domain. (Multi-label classification refers to those classification tasks that have two or more class labels, where one or more class labels may be predicted for each example.)
- As Some businesses may required more than one digital marketing strategy based on their business model, multi-label classification will give them one or more than one strategy.
- Our target variable (types of digital marketing strategies) is a labelled categorical data such as Search Engine Optimization, Social Media Marketing, Content Marketing, and others.
- To predict optimum digital marketing strategy, we will implement the Multi-label kNN classifier, Multi-label Decision Trees, and Multi-label Random Forests.
- For the evaluation of the model we will use the multi-label confusion matrix, and the evaluation metrics such as accuracy, precision, recall, and f1 score.

Challenges & Mitigation

- Capturing the data from rural areas where the digitization has not been reached to a certain level.
- The possible mitigation for this challenge is to deploy the ground teams in the rural area and collect the relevant data.

Keeping ahead of Competition

- Digital marketing is growing at a rapid rate and Small and Medium-sized Enterprises (SMEs) are facing several challenges due to digital marketing.
- Most SMEs are unable to recognize their target customers. Without knowing the target customers, the SMEs will not be able to enhance the profit margin as customers are the major resource for enhancing the profitability of a business.
- Predicting optimum digital marketing strategy for the company will give them cutting edge over the competitors.

Learnings & future plan

- Targeting the SME's in the Rural areas.
- Capture more and more relevant data to make the more accurate prediction.



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