Implemented machine learning to generate automated personalized ads at scale for a US-based advertisement agency

Client Overview:

The client is a US-based agency that creates customized brand experiences for every customer with an AI and ML-based advertisement platform. The platform analyzes the design preferences of all their target audiences to recommend posts, ads, and landing pages, thereby driving a higher probability and user engagement.

Challenges:

The client wanted to analyze the existing ads and videos to discover new patterns of customer preference and automate the content to generate more targeted advertisements. By analyzing the current textual and visual factors like images, videos, body text, and headline, the client wanted to:

- Improve the cost metrics prediction like CPR, CPC, CTR, etc.
- A solution to auto-generate ad texts with keywords to provide better metrics
- Eliminate the need for writing content and be cost-efficient
- Speed up the ad generation process with automated suggestions

They were looking for a solution that would save marketers time and money by generating personalized ad copy and media, which can be launched straight to social media.

Solution:

Algoscale implemented a 360-degree solution to improve the suggestion and cost metrics. The three-fold approach involved the following:

1. Implementing SHapley Additive exPlanations (SHAP) model to analyze the ads and get the insights
2. Implementing Random Forest Regressor to predict the cost metrics for different images, videos, body text, and headline
3. Using Generative Adversarial Network (GAN) to generate the unique text which can be used by the client for the text body of the advertisements

The solution enabled the platform to create text of the advertisement body and headline with keywords, which would not only identify important features and patterns but also provide better metrics to target the ads.