# Predictive analysis for a retail startup, for object detection and facial recognition.



# **TECH STACK**

- Python
- Flask
- Pandas
- · Sci-kit learn
- Detectron 2
- CNN

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# CHALLENGES

The client encountered significant challenges in performing predictive analysis for their business due to the inability to obtain specific information about their customers, such as age and gender, when they were wearing masks. Furthermore, they faced difficulties in gathering data regarding customers who were accompanied by a cart.

## SOLUTIONS

After a thorough assessment of the client's needs and an extensive evaluation of available resources, Euphoric proposed an optimal solution. The recommended approach involves leveraging Detectron 2, a powerful object detection framework, in conjunction with a Convolutional Neural Network (CNN) for accurate identification of objects, including carts.

Additionally, Euphoric suggested developing a customized facial feature recognition model to address the challenge of identifying customer age and gender even when they are wearing masks. This comprehensive solution ensures precise data collection and enables effective predictive analysis for the client's business.

Implementing this solution proved to be highly beneficial for the client as it provided them with enhanced insights of customer age group and gender.

## BENEFITS

This valuable insight enabled them to identify trends and patterns in customizing their marketing strategies and product offerings accordingly. The solution played a vital role in personalizing the shopping experiences of customers, as it empowered the client to identify the age and gender groups of consumers shopping in specific stores.

As a result, decision-makers were able to swiftly evaluate the situation and make informed choices, leading to enhanced efficiency, productivity, and profitability.