Retail Vision

Store Analytics project

eSided

Quick Summary

By leveraging an integrated computer vision and analytics solution, the retail chain was able to drive major operational efficiencies, deliver better customer experience, and boost profits across its network of physical stores.

The Tech Stack

- **Python** for building the computer vision pipelines.
- **Keras** & **TensorFlow** for training deep learning models.
- **React** to build internal web apps.
- **AWS SageMaker** & **Rekognition** for model deployment.
- **Power BI** dashboards for analytics.

Ready to Start?

We recognize the inherent uncertainties of AI project outcomes. To mitigate risk, our engagement model requires only a minimal, fully refundable deposit. If we encounter any critical issues, we will refund your deposit. Should the project advance to the Proof of Concept stage, we will apply the deposit towards the overall project cost.

The Problem

A retail chain was struggling with low customer conversion rates and high operational costs across its retail stores. Only 20% of store visitors were making a purchase, while high employee turnover and inefficient inventory management were eating into margins.

The Solution

Leveraging computer vision and analytics, a new Viewlytics Pro system was implemented across stores. The system uses traditional Video cameras with state-of-the-art CV algorithms to capture real-time data on customer movements and purchasing behavior. Advanced analytics models then converted this data into actionable insights on optimizing store layouts, product assortments, pricing, staffing and inventory. The tech stack included Python for building the computer vision pipelines, and Keras and TensorFlow for training deep learning models, React to build internal web apps, AWS services like SageMaker and Rekognition for model deployment, whereas, Power BI dashboards are used for analytics.

The Outcomes

Within 6 months of rolling out Viewlytics Pro, the retail chain saw tangible gains:

- **40% increase** in customer base as more shoppers visited stores
- **25% higher** customer conversion rates with purchases per visitor improving
- **10% cut** in HR costs due to optimized scheduling and staffing driven by customer traffic data
- **$1.5M** in additional profits annually across the retail chain's network of stores.

The video analytics data and their insights also reduced out-of-stocks by 30% and improved inventory turns by 20%.