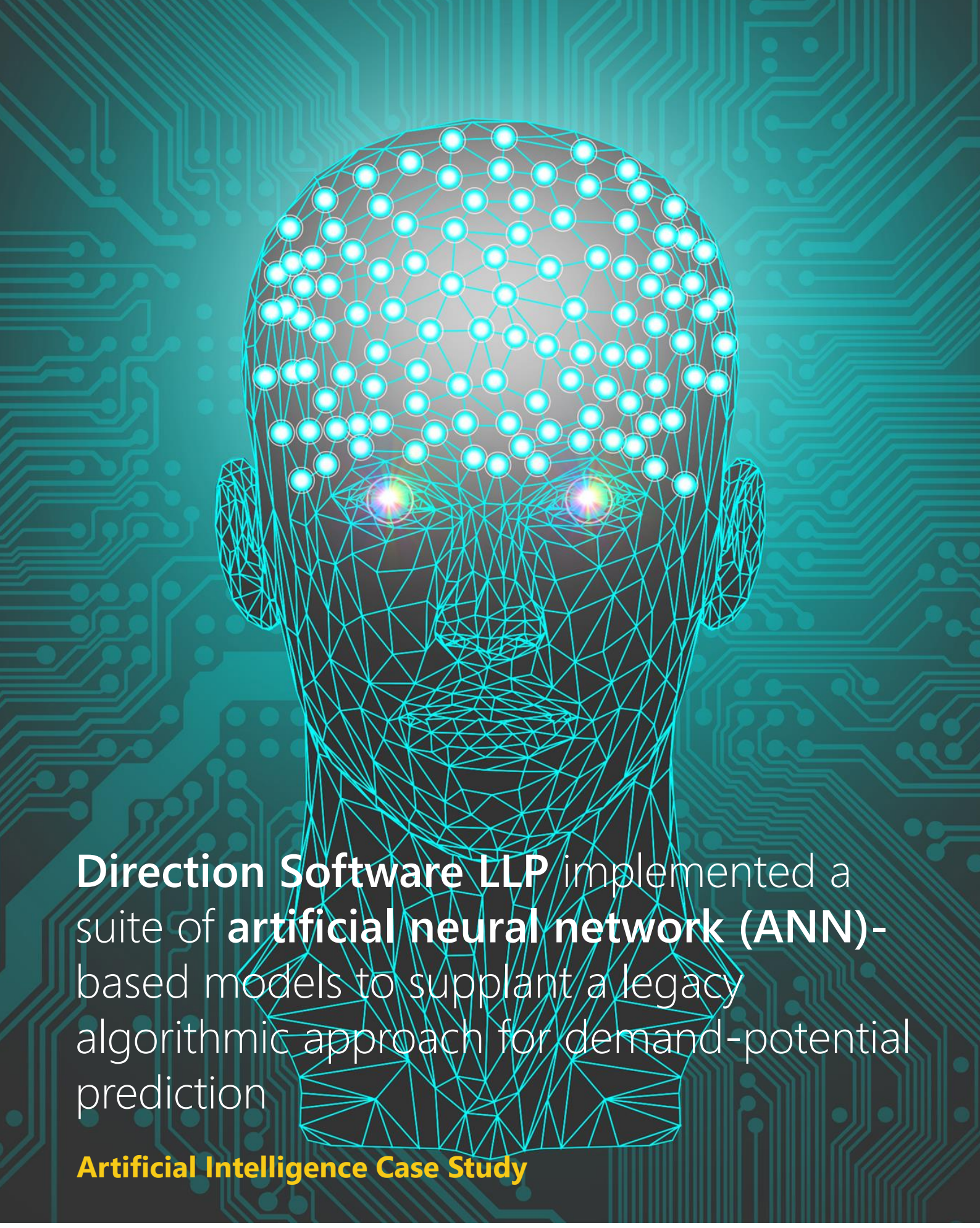

Direction Software LLP implemented a suite of **artificial neural network (ANN)-based models to supplant a legacy algorithmic approach for demand-potential prediction**

Artificial Intelligence Case Study

For more information contact
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DIRECTION
Software LLP

Solution Implemented for

An internationally successful fashion company reaching more than 35 Million customers in 30 countries.

Business / IT Challenge

Provide an improved yearly-horizon demand-potential forecasting solution for determining the demand-potential of products across 11 regions.

- Current solution requires manual inputs from multiple departments.
- Uses factors to calculate demand-potential for fallback regions using the main region forecast
- Data of the Product Portfolio was scattered across disparate systems.
- Inefficiencies in supply-chain management due to lower-accuracy in forecasts.
- Inability to scale (e.g., internationally, multiple stores, additional product launches, etc.).

Solution

- Multiple ANN-based models used to replace a legacy algorithm-based solution to forecast demand-potential across 11 regions for over 290k SKUs across multiple product-lines.
- Over 800 attributes used to derive the forecasts, that offered an improvement of around 30% over the existing forecast-metrics in initial results
- Solutions based on other models (FB Prophet, Google TFT) also being developed to offer improved forecasts for selected product-categories.

Technology

- Python, Deep-Learning, GluonTS, ANN, Keras, FB Prophet, Google TFT, Mlflow, Apache Airflow

Benefits

- Efficient forecasting solution with a marked improvement of over 30% in forecast metrics
- Each region gets its own forecast
- Quicker process to forecast, that allows for more frequent forecasts (weekly as opposed to months earlier) with smaller horizons
- Lightning-Fast Speed to Market

About Direction Software LLP

We are a software services firm, specializing in developing & implementing Internet strategies for businesses & providing high-end software development services including Custom Programming & Offshore Development.

With 17,000 sq. ft. of space in a modern building in central Mumbai the hub of all business activities in Mumbai, Direction Software LLP is fully equipped with state-of-the-art infrastructure and networked with redundant dedicated internet access from different providers.

Our vision is to be a trusted IT partner, leveraging our knowledge of tools and technologies to provide simple, integrated and innovative solutions that result in maximum customer satisfaction.

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