



Case Study:

AutoSync Corp Wins Discount Tire Contract

autosynccorp.com



Executive Summary

In 2019, AutoSync Corp identified an opportunity when Discount Tire needed a powerful new API capable of dynamically displaying custom wheels on exact vehicle make, year, and models for an interactive e-commerce experience. Don Milligan of Cloud Pathfinder Services Inc (formerly Anycloud Co) was engaged early to architect and develop a cutting-edge solution using Google Cloud Platform. Under his leadership, the team successfully implemented advanced data management strategies and innovative machine learning solutions, dramatically reducing model generation from weeks to mere minutes. AutoSync Corp won the prestigious Discount Tire contract through their proof of concept, and as of 2025, their APIs continue to power Discount Tire's online platform.

Background

AutoSync Corp was one of our first customers under the Anycloud Co banner in 2019. AutoSync's platform is known for its intuitive YEAR/MAKE/MODEL vehicle selection interface, predictive search capabilities, and now the innovative Visual Vehicle Studio. Recognizing a gap between consumer expectations and available retail experiences, AutoSync pioneered the Visual Vehicle Studio, an advanced tool designed to deliver personalized, realistic visualization of aftermarket wheels directly onto users' exact vehicle models.

Challenge

The vision behind AutoSync's Visual Vehicle Studio and API service faced several considerable hurdles. Initially, all the required data—over 65,000 vehicle images, hundreds of thousands of aftermarket wheel images, and approximately 150,000 records of unstructured data—was delivered in raw, disorganized formats. The sheer scale of data, coupled with the precision required for accurate image placement, necessitated not only extensive data engineering but also a highly performant, scalable infrastructure capable of handling over 100,000 requests per second at launch.

Solution



Don Milligan managed the project and personally spearheaded the API development prioritizing performance and scalability. Taking direct control after initial data engineering attempts fell short, he crafted custom automated ETL scripts capable of accurately organizing and formatting vast amounts of data.

To streamline image processing, Don introduced a novel application of machine learning technology. Instead of outsourcing expensive and slow manual image alignment tasks, he developed a topographical machine learning model capable of autonomously learning and precisely placing rim images onto vehicle models, significantly cutting new image processing time from weeks to mere minutes.

Implementation

The high-performance API was built using Golang for maximum speed, leveraging a MySQL database [known for its strengths in low latency read-only scenarios] and optimized the database accordingly. Hosting the API and SaaS platform on Google's App Engine ensured rapid time-to-market and scalability from day one.

Recognizing the complexity and subtle variations of vehicle makes and models, Don temporarily became an automotive data expert, leveraging automated comparisons with the Auto Care Association databases and Evox vehicle image libraries for precise data accuracy.

The sophisticated machine learning components were developed entirely by Don, integrating Google's Auto ML, Cloud Vision, and Vertex AI services to build robust, scalable solutions.

Results

Initial challenges with slow query performance (up to 30 seconds per query) were swiftly resolved when Don stepped in and redesigned the database schema, dramatically reducing response times to under 100 milliseconds. Discount Tire selected AutoSync's API solution in September 2020, and initially leveraged use of AutoSync's v1.0 of Visual Vehicle Studio for their planning phase and QA testing.

Today, Discount Tire's interactive model and wheel visualization tool continues to rely heavily on AutoSync's APIs and image management. Inspection of the website code in a web browser confirms AutoSync URLs as the source of the images. This successful launch positioned AutoSync as an industry leader, subsequently securing



partnerships with multiple wheel and tire retailers seeking sophisticated online platforms.

Client Testimonial

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STRENGTHS

Honest and direct with everything.

Consistently strives for perfection without wasting time.

Accurate and realistic budgeting of the time and resources required to complete milestone.

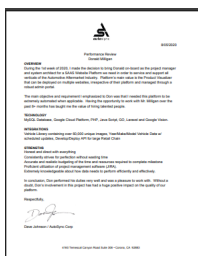
Proficient utilization of project management software (JIRA).

Extremely knowledgeable about how data needs to perform efficiently and effectively.

In conclusion, Don performed his duties very well and was a pleasure to work with. Without a doubt, Don's involvement in this project has had a huge positive impact on the quality of our platform.

Respectfully,

Dave Johnson
Executive Sales Director
AutoSync Corp”



****A full recommendation letter from Dave is available upon request.**