

Google Cloud Modernization at Wayfair Results in 23% Faster Browsing and 30% Less Fraud

Pythian helped the global eCommerce giant migrate its monolith database to Google Cloud, so Wayfair can now release new features to customers and suppliers in a day—a process that used to take years. The company is also saving millions of dollars, increasing developer velocity, and making better use of data to improve the customer experience.

Overview

Wayfair Inc. is the destination for all things home. The company, founded in 2002, currently offers 30 million products from more than 20,000 global suppliers through its various sites, including Wayfair, Joss & Main, AllModern, Perigold, Wayfair Professional, and Birch Lane. Headquartered in Boston, the company has a business presence in the U.S., Canada, the U.K., Ireland, and Germany.

The challenge

With 18 warehouses and a catalog of more than 30 million products, Wayfair was in need of a transformation to remain agile. The company had thousands of applications built in a monolithic architecture, which prevented them from being able to rapidly deploy new features to customers and suppliers.

They also wanted to make better use of their data, glean insights that could provide more personalized and dynamic experiences for customers, better understand economic shifts and trends through improved reporting capabilities, develop flexible, scalable, future-proof systems for new use cases, and make it easier for developers to select a database that would meet their feature requirements.

To do this, they needed to migrate their Microsoft SQL Server database—and a complex set of interrelated databases with little to no structure that came about from organic growth—to a microservices approach, which would enable rapid feature rollouts to users and reduce the rising cost of its MS SQL spend. But they needed to do this quickly, without derailing their engineering teams, customers, or partners.



Industry

eCommerce

Location(s)

U.S.

Technologies

- Gemini API in Vertex AI
- Gemini for Google Cloud
- AlloyDB for PostgreSQL
- BigQuery
- Bigtable
- Cloud Functions
- Cloud Run
- Cloud SQL for PostgreSQL
- HashiCorp Terraform
- Google Kubernetes Engine (GKE)

Overview

Pythian helps Wayfair achieve 23% faster browsing and 30% less fraud through Google Cloud modernization.

The solution

Wayfair decided to adopt a microservices approach in a cloud-native environment hosted on Google Cloud. The company turned to Pythian to provide a skilled set of resources that could augment their thinly spread customer engineering team, as well as its expertise in Generative AI (GenAI). Pythian offers a framework for cost-effective GenAI discovery, proof of concept, and production offerings in concert with its existing data services, helping businesses maximize the power of their data estate and glean high-speed insights and solutions across the entire enterprise.

“As Wayfair adopts more public cloud and cloud-native services, there needs to be a focus on the applications that matter to our customers and our suppliers,” said Matthew Ferrari, Head of Martech, Data and Machine Learning Platforms, and Infrastructure, with Wayfair. “So when we looked for a partner, we thought who better than the data experts from Pythian to show our database and data architects how to adopt these cloud-native data tools?”

Pythian helped Wayfair rapidly migrate customer data from a high-value business unit on MS SQL to Cloud SQL for PostgreSQL on Google Cloud. With a solid foundation in place, Pythian assisted Wayfair's IT team in building a GenAI toolkit using Vertex AI code generation to remove the manual efforts involved in the transformation process. The toolkit defines code that can be reused (or depreciated), allowing Wayfair to rapidly speed the migration to cloud technologies.

"Wayfair has thousands of SQL applications and petabytes of data across our architecture. As we thought about modernization and leveraging Google Cloud, we relied on Pythian to be the experts on how to do it from an architectural perspective and then execute with our data team in actually getting it done."

– Matthew Ferrari, Head of Martech, Data and Machine Learning Platforms, and Infrastructure, Wayfair

Business need

Wayfair needed to transform its monolithic architecture to quickly deploy new features and better utilize data for personalized customer experiences. They sought a scalable, future-proof system to handle their vast operations and reduce costs.

Solution/What Pythian did

Pythian provided expertise and resources to migrate Wayfair's data to Google Cloud. They implemented a microservices approach, moving from MS SQL to Cloud SQL for PostgreSQL, and developed a GenAI toolkit using Vertex AI to automate and accelerate the process.

Result/Key outcomes

Wayfair now saves millions and can release new features in a day. Pythian's toolkit reduced a 46-year effort to months, increased efficiency, and improved system speed by 23%. Wayfair also reduced fraud by 30% and decreased time spent on major incidents by 82%.

Learn more about Pythian's experience and expertise in marketing analytics [here](#).

Business outcome

With the migration to Google Cloud, Wayfair is saving millions of dollars over a multi-year spend. New features can now be released in one day, versus what could often take years.

Pythian's GenAI toolkit has lowered the time to value, turning what would have been 46 years of effort down to just months—with a reusable toolkit for future migrations. The toolkit defines code that may be reused or depreciated, allowing Wayfair to rapidly speed migration.

Through a database-as-a-service (DBaaS) platform, developers now have a much faster method of enabling the provisioning of a Spanner instance through a self-service flow. That means they can spend more time working with users and less time on infrastructure management.

To date, more than 16% of customer traffic is now on a replatformed experience, and average speed is 23% faster. The company is also spending 82% less time on major incidents and reduced fraud by 30%. Its net promoter score (NPS) for support increased 28.5% while its tooling NPS increased 41.22% with the use of Google Cloud Databases. In addition, there's better alignment of systems and data architecture with business reporting goals and governance structures.

Overall, working with Google Cloud and Pythian has helped Wayfair reduce time to market for new use cases, reduce operational overhead, and increase developer velocity—enabling them to scale at the speed of business.

Want to see similar results for your company?

[Get in touch with a Pythian Google Cloud](#) expert to see how our team can help.

About Pythian

Founded in 1997, Pythian is a data and analytics services company that helps organizations transform how they compete and win by helping them turn data into valuable insights, predictions, and products. From cloud automation to machine learning, Pythian designs, implements, and supports customized solutions to the toughest data challenges.

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Contact us

+1-866-798-4426 | info@pythian.com | [LinkedIn](#) | [X](#)

Offices

Ottawa, Canada

Minneapolis, USA

New York City, USA

London, England

Hyderabad, India

Bangalore, India

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