INDUSTRY
Hospitality

TECHNOLOGIES
AWS Cloud, Kinesis Firehose/Helper/ Agent, Amazon S3 Blob storage, Amazon Redshift, Tableau

BUSINESS NEED
The hotel wanted to make use of large volumes of data from multiple sources, including their booking system and in-room tablets that captured how clients customized their room settings. This would enable them to optimize the overall guest experience and customize room settings before guests arrive for return stays.

SOLUTION
Pythian developed a scalable, real-time, self-serve platform on AWS that integrated data from multiple sources and prepared it for user-friendly dashboards. This solution gave them actionable insights on how they could streamline operations and refine their services.

RESULTS
An increase in customer satisfaction levels and loyalty have resulted from the company's use customer data to personalize the guest experience.

ELITE HOTEL CHAIN USES DATA TO ENHANCE LOYALTY

A luxury hospitality and real estate group was looking to leverage their existing wealth of consumer data in order to optimize guest experience at their properties. As consumers have high expectations when it comes to luxury experiences, the client wanted to deliver beyond guest expectations to ensure future loyalty.

Knowing that guest loyalty increases with the satisfaction of the first exposure to the room environment, the client wondered if they could use that data to predict how to deliver the best possible experience. Great first exposure doesn't only mean a room has a fresh scent, it also includes more subtle things such as room temperature and lighting levels, which create an impression of satisfaction with the guest. By learning how guests used room services, they could make improvements to operations, better cater to guests' requirements and inform future marketing and loyalty campaigns.

CHALLENGE
The Pythian data science team was engaged to analyze two data sources - the Opera hotel management system with guest and reservation information and the room data from in-room tablets. The client requested a system to visualize the data in real time but did not have the internal expertise to carry out the analysis. They turned to Pythian for help.

SOLUTION
Pythian developed a scalable, real-time, self-serve platform to access data from a tablet in each room at each property location. The platform was designed to integrate data from multiple sources and prepare it for visualization via user-friendly dashboards.

Pythian's data scientists set up data access, analytics and a reporting infrastructure, to be viewed on Tableau. The scalable solution was designed to handle a large volume of events, streaming from each hotel room. It also processed and augmented data to deliver actionable insights in a timely fashion, so that operations and property management could

Pythian

streamline operations and refine their services. The in-room android tablets were configured to capture room use data, and to resolve freezing events if tablets become unresponsive.

Pythian's data scientists used AWS Redshift to stream the data, and Kinesis Firehose to manage the queuing, with the data being managed in the AWS Cloud.

The solution was delivered within six weeks. Using the dashboards, the client could prepare the room for guest arrival. When a previous guest returned, historical data could be used to predict room temperature and lighting compensating for outdoor temperature. For new guests, predictions could be made based on averages for that time of year taking gender, home location and outdoor temperatures into account.

OUTCOME

Pythian's dashboards and analytics of tablet usage enabled the hotel to customize the room experience for individual guests upon their return.

In response to the "how was your stay" survey questions, guests have stated that the room felt like a "sanctuary", and they appreciated the in-room controls and personal touches that contributed to making their stay more memorable. As a result, satisfaction levels are trending up.

Going forward, the client wants to roll this solution out to its ten other properties. The client plans to make further improvements to the guest experience, measuring the impact with its loyalty program, to inform future marketing campaigns.

ABOUT PYTHIAN

Pythian is a global technology services company that helps businesses compete by adopting disruptive technologies such as advanced analytics, big data, cloud, databases, DevOps and infrastructure management to advance innovation and increase agility. Specializing in designing, implementing, and managing systems that directly contribute to revenue growth and business success, Pythian's highly skilled technical teams work as an integrated extension of our clients' organizations to deliver solutions that enable the strategic use of data, accelerate software delivery, and ensure reliable, scalable IT systems.

WORLDWIDE OFFICES

Ottawa, Canada	London, England	Sydney, Australia
New York City, USA	San Francisco, USA	Hyderabad, India

Pythian