Worldreader

CASE STUDY

How SolDevelo has improved data collection for Worldreader to fight the reading crisis among children

OBJECTIVES

The existing version of the pipeline that aggregates events from the BookSmart application was getting overloaded with data. The time required for the data to rebuild for the app's dashboards was getting too long. To provide real-time information on the users, the pipeline needed to undergo a renovation. There were several other improvements required, including increased quality of testing, more data aggregation features, additional filtering options and new endpoints.

SOLUTIONS

To facilitate data processing and increase its effectiveness, our team migrated data storage from RDS to Redshift. The time period required for rebuilding the data went down from 24 hours to only 2 hours.

We have implemented API improvements, increased the quality of code, added more methods of filtering and aggregating data, and created new endpoints.

Furthermore, we've created a backend to "Readers Dashboard" and "Tips Dashboard."

BENEFITS

More accurate data
Accurate data is what allows Worldreader to grow and develop new strategies that will benefit children around the world. Efficient and effective data aggregation structures are a necessity.

Multiple profiles on one account
Teachers can now create classrooms within the application and track the reading progress of each student.

New data filtering and aggregation features
Improved data management increases the efficiency of the whole initiative.

AT A GLANCE

The Challenge
The scope of project included:

- Data pipelines transformation;
- Data investigation;
- API extension;
- New Dashboards.

THE BIGGEST OBSTACLES

TIME ESTIMATIONS

The process of analyzing data is time-consuming and unpredictable. To avoid wasting time, we needed to organize our work carefully.

DATA DISCREPANCIES

Our team needed to adjust the data coming from different sources according to specific parameters.

NEWLY GAINED EXPERIENCE

What makes this project special is the fact that the whole infrastructure is based on AWS. It gave our team a chance to get familiar with multiple services, particularly Glue, Redshift and S3. While working on Dashboards we also had a brief experience with a Flask API run on Lambda.

We also had a chance to compare the data aggregated by the old pipeline and the new one. Not always were they the same. Observing these discrepancies was an opportunity for our team to check the accuracy of calculations and draw conclusions. Additional data investigation was done through external tools.

THE IMPACT

Worldreader currently operates in over 100 countries and has already convinced 21 million children to become readers. It is a truly inspiring initiative that has a great potential to transform the way children and their caregivers look at reading.

Using this opportunity, we would like to encourage you to join the movement! By reading to or with your children for at least 10 minutes a day, you share with them a gift that will impact their whole lives. The goal set by Worldreader is to get children reading at least 25 books every year. We invite you to enter the challenge and wish you good luck!

ABOUT US

SolDevelo is a dynamic software development and information technology outsourcing company focused on delivering high-quality software and innovative solutions.

ISO 9001 confirms our dedication to the highest quality and ISO 27001 shows that we treat security extremely seriously. Over 70% of our team members are certified Scrum Professionals, over 35% are Oracle Certified Professionals and 100% of our quality assurance team has ISTQB certificates.

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