

CASE STUDY

Democratizing Education Quality with Data-Driven Strategy

Numerade:

A high growth education tech company providing world-class expertise.

Quality education is crucial for success, but many students face barriers that are often beyond their control, such as geographic location, school funding, and socioeconomic status. The COVID-19 pandemic further widened these disparities, with STEM education especially hard hit. While some affluent schools have implemented programs to address these issues, underprivileged students often struggle with outdated resources and limited opportunities.

Given how urgent accessible and affordable education is, companies like Numerade assist by offering students a customizable learning experience. Co-founded by Alex Lee and Nhon Ma, Numerade aims to provide a superior learning experience by offering affordable access to world-class expertise. Through an AI tutor bot and a library of video lessons for over 5,000 textbooks, Numerade offers STEM students on-demand tutoring designed by expert educators.

In a short time, Numerade has built a substantial membership base and is actively working to bridge education gaps. However, after its initial success, the rapid expansion of its library has caused some challenges in its growth.

The Challenge:

Scaling Fast, But Numerade's Performance Misses the Mark

Just as Numerade's membership base grew, so did its need for more content. The company rolled out hundreds of new videos a month. More educators were needed to create content for textbooks not yet in the system. Learners were accessing the website at significantly increasing rates. The growing demand continued to max bandwidth and cause frequent outages.

The website could only handle a few hundred simultaneous users before it crashed. Videos took several minutes to load, and in some cases, they could not load at all. A recent Google report shows that 53% of users will abandon a website with a load time exceeding three seconds. Numerade faced a serious challenge due to users disregarding the service. These load time issues caused serious frustration among the user base and caused more cancellations, requiring immediate action. The company had to implement a scalable data management system - this ensured optimal service delivery and could keep up with their expanding user base. Thousands of videos were uploaded, making digital infrastructure investment

critical to Numerade's continued success. As Lee noted, "We needed a more robust way of orchestrating things behind the scenes." There was a real need for a strategic overhaul to support both Numerade's current operations and future ambitions.

Migrating to a new data system was not an easy task. Numerade already had a massive amount of data logged in one place. They needed a solution that could migrate seamlessly with the bare-bones infrastructure it already had. Could Numerade find a way to transfer all of its data to a new system without interruptions?

Slow service and unplayable videos were problematic for Numerade, risking subscriber trust and access for disadvantaged learners. Even brief downtimes could undermine years of progress in quality education. However, Numerade was determined to address these data management issues and combat generational education gaps head-on.

The Solution:

Turning to Experts and Tackling Numerade’s Toughest Problems

Numerade partnereed with Data-Sleek for data management and leveraging their expertise as data consultants. Data-Sleek developed custom databases using ETL processes. These processes optimized data accessibility and reduced load times for Numerade's content. Since Numerade anticipated growth, Data-Sleek created a real-time dashboard for data visualization. The new dashboard enabled Numerade to monitor performance and receive real-time alerts. With vital new insights gained through the dashboard, Numerade's services were enhanced by Data-Sleek's partnership, improving its market position.

With its newfound data management system, Numerade could quickly scale its business to hundreds of thousands of customers while providing them with a seamless experience. More importantly, it could continue furthering its mission of democratizing the educational landscape.

The Results:

Graduating to New Levels of Success

Numerade successfully switched to Data-Sleek's new data management system, which greatly enhanced their adaptability and resilience, including drastically reduced query load times to nanoseconds. This allowed thousands of simultaneous app users without experiencing outages or lag. It not only protected Numerade against inadvertent downtime, but also attracted additional subscribers thanks to its new efficiency.

The improved analytics dashboard provided groundbreaking insights into the company's user behavior. Subsequent findings were used in the development of an AI tutor bot, giving users improved support.

About Data-Sleek

Data-Sleek® is a consulting agency and a leading provider of comprehensive data management solutions. We specialize in data transformation, data migration, data integration, data architecture, data warehousing, and database consulting. Our commitment to client satisfaction empowers organizations of all sizes to unlock the full potential of their data assets. Data-Sleek is a trusted partner of Fortune 500 companies, dedicated to innovating and revolutionizing the way you do business.



Lee emphasized this as a pivotal moment, showcasing Numerade’s commitment to its users.

The system upgrade also lowered overall costs, making customer acquisition more profitable and improving retention rates. Numerade was free to prioritize its customers' interests with the resolution of their data issues. This successful example illustrates the key principle that for this business, success means understanding students' needs. Enhancing their data architecture was a successful strategic decision that reaffirmed the company's commitment to growth and innovation in the education sector.

Ready for your own success story?

Learn how Data-Sleek makes data management easy.

Contact us to learn more about Data-Sleek and how we can help drive actionable results with your data.

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