CASE STUDY
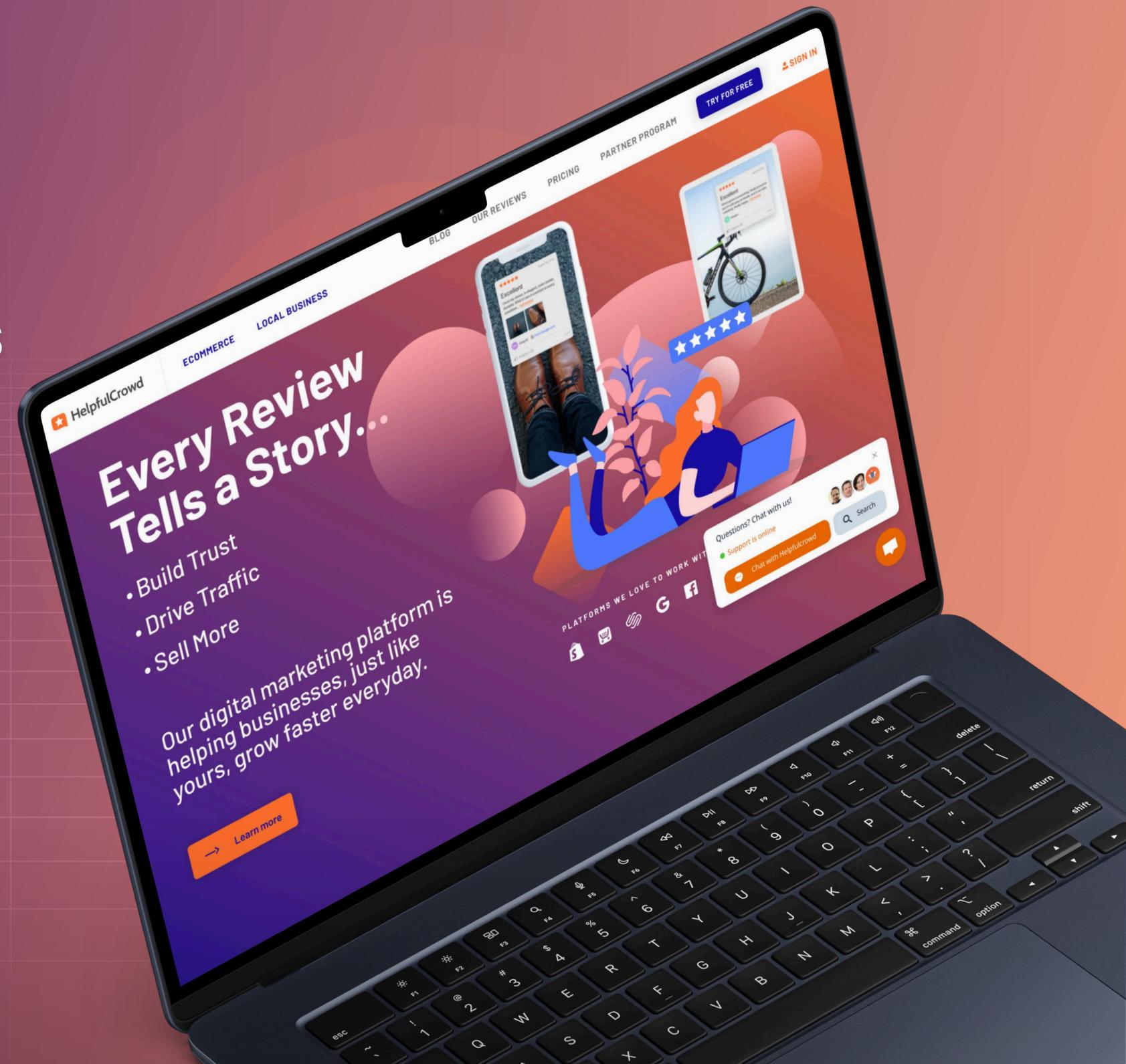
Propelling Productivity: A Case Study on HelpfulCrowd's Performance Optimization

Client: **HelpfulCrowd**

Overview

HelpfulCrowd, a leading customer content platform, partnered with us to tackle critical performance bottlenecks, escalating infrastructure costs, and a complex deployment process. Through a deep technical audit, backend and database optimization, and a full migration of their infrastructure from AWS to Heroku, we were able to cut their infrastructure costs by 50%, dramatically improve server response times, and double their feature release cycle. These improvements gave HelpfulCrowd the stability and agility they needed to innovate and scale effectively.

■ Industry
SaaS / E-commerce Technology

■ Services
Performance Optimization, Infrastructure Migration, Feature Development

■ Backend
Ruby on Rails, Sidekiq

■ Database
**PostgreSQL, Redis**

■ Infrastructure
AWS, Heroku, Cloudinary

Performance Bottlenecks and Development Delays

HelpfulCrowd, a leading customer content platform, was facing significant technical challenges that were impeding its growth. The platform suffered from persistent performance issues, with its background job processor, Sidekiq, acting as a bottleneck and the PostgreSQL database frequently reaching 100% CPU utilization. These inefficiencies not only made the platform unreliable but also drove up operational costs. Their AWS infrastructure was consuming more resources than necessary, leading to inflated expenses.

Compounding these issues was a complex and risky deployment process, making updates and rollbacks difficult and time-consuming. As a result, the development team was tied up with firefighting, which delayed the release of new features and integrations with platforms like Shopify and Squarespace. HelpfulCrowd needed a solution to stabilize its platform, reduce costs, and accelerate its development cycle to maintain a competitive edge.
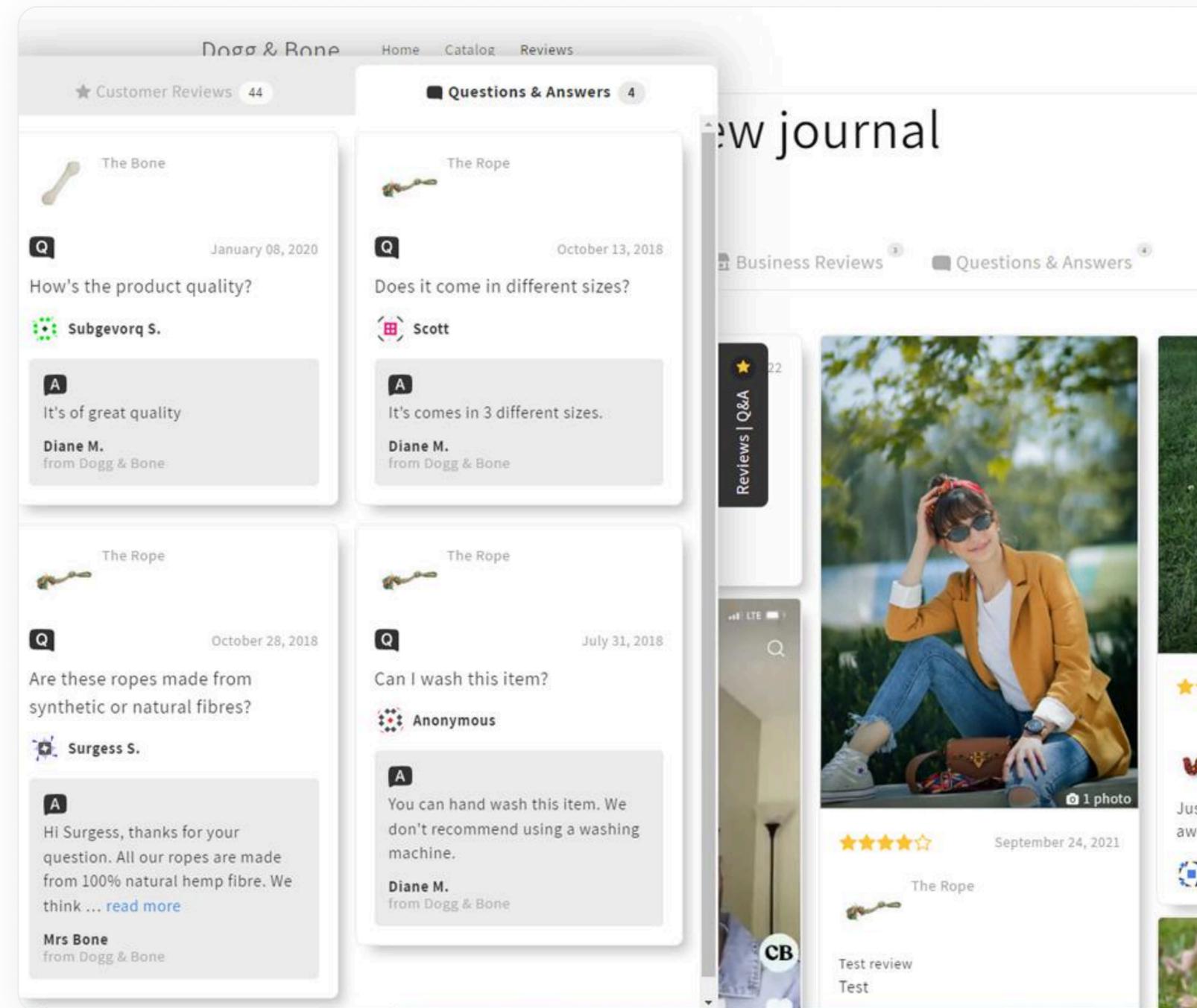
A Strategic Approach
to Optimization and Modernization

Our team took a multi-pronged approach to address HelpfulCrowd's challenges, focusing on performance tuning, infrastructure simplification, and workflow improvements.

First, we conducted a deep performance diagnosis using monitoring tools, analyzing server logs, database activity, and Redis slow logs to identify the root causes of the bottlenecks. Based on these insights, we implemented several key optimizations:

- **Backend and Database Tuning:** We implemented caching strategies, rewrote inefficient SQL queries, and added crucial database indexes.

- **Job Logic Refactoring:** The logic for Sidekiq jobs was refactored to improve efficiency and reduce the CPU load.

Next, we streamlined the infrastructure by migrating the application and database from AWS to Heroku. This strategic move significantly reduced the complexity of server management and deployment, allowing the HelpfulCrowd team to focus on innovation rather than infrastructure maintenance.

Finally, with the platform stabilized, we worked with HelpfulCrowd to establish a faster, more agile development workflow. This collaborative effort led to the rapid delivery of high-impact features, including an OpenAI integration, new pricing plans, and a complete front-end redesign.

A Transformed Platform

The collaboration with our team delivered measurable, impactful results for HelpfulCrowd.

The performance optimizations and infrastructure migration resulted in a more stable and efficient application. Deployments became reliable and straightforward, giving the HelpfulCrowd team the confidence to handle increased traffic. Most importantly, the improvements freed up the team to innovate and respond to market opportunities at a competitive pace.

Infrastructure Costs

Reduced by 50%

Server Response Times

95th percentile dropped to 500 milliseconds

Feature Release Cycle

Doubled in speed

Conclusion

The successful partnership with HelpfulCrowd is a prime example of how strategic software development and technical expertise can solve critical business problems. By combining a deep technical audit with a focused approach to optimization and infrastructure modernization, we were able to transform HelpfulCrowd's platform, creating a more stable, efficient, and cost-effective foundation. This project not only showcases our ability to deliver measurable results but also highlights our role as a true technology partner, enabling clients to focus on growth and innovation.

Links

Website

[Visit the Website ↗](#)

Shopify

[Available on Shopify App Store ↗](#)

What Our Client Says

Zuzana S.

Owner

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More Than Outsourced Talent — Real Partners

Working with the team from NUS Technology has been a fantastic experience. They quickly understood our goals for HelpfulCrowd and became a natural part of our team. Their technical expertise, proactive approach, and strong sense of ownership consistently exceeded expectations. They don't just deliver what's asked — they think ahead, suggest improvements, and care deeply about quality. Communication has been clear and efficient, and deadlines have always been met. Thanks to their contribution, our product development has become faster and more stable. We're very satisfied and look forward to continuing our collaboration with NUS Technology.

THANK YOU

For Reading Our Case Study

nus Technology

Contact Us
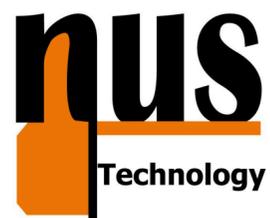
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