

CASE STUDY: FINANCE PLATFORM FOR DIY INVESTORS



Aimprosoft transforms partner’s stock insights site into a robust platform for DIY investors

Partner information:

Partner: NDA

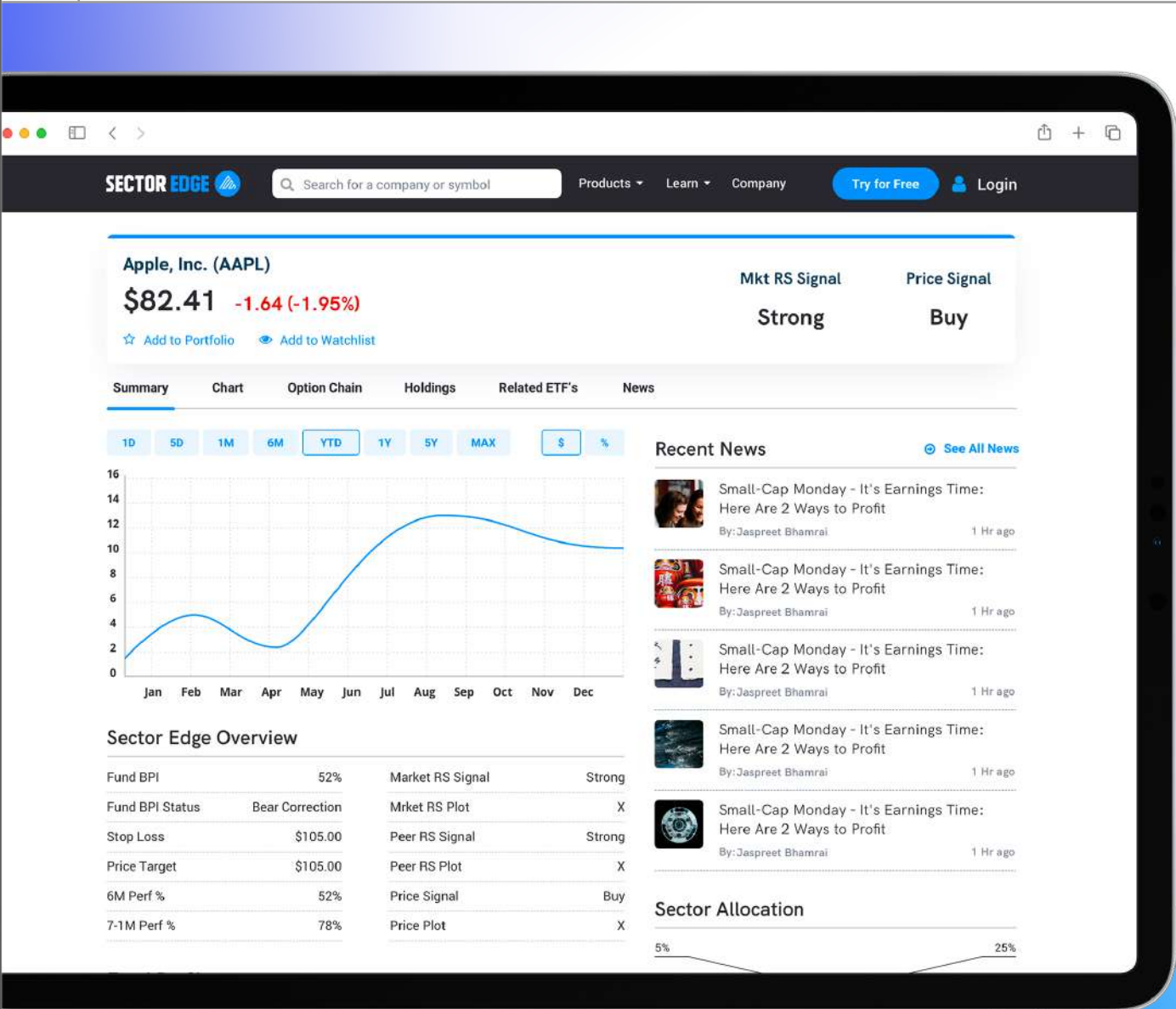
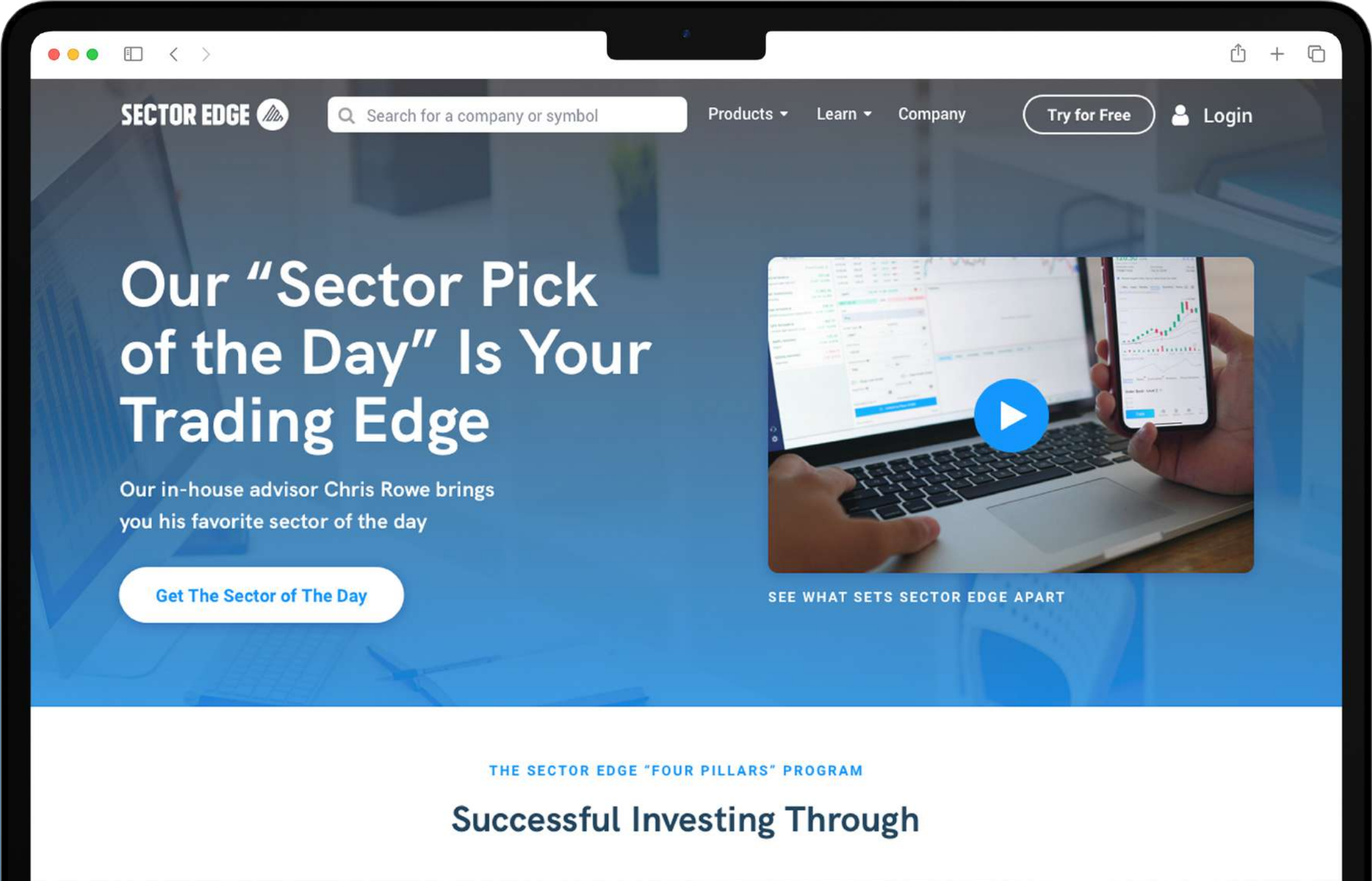
Company size: 51-200

Headquarters: USA

Team size:

Backend developers: 4
Frontend engineers: 2
QA engineers: 2
Project manager: 1

Business analysts: 2
DevOps engineer: 1
Data engineers (Scala): 2
UI/UX designers: 2



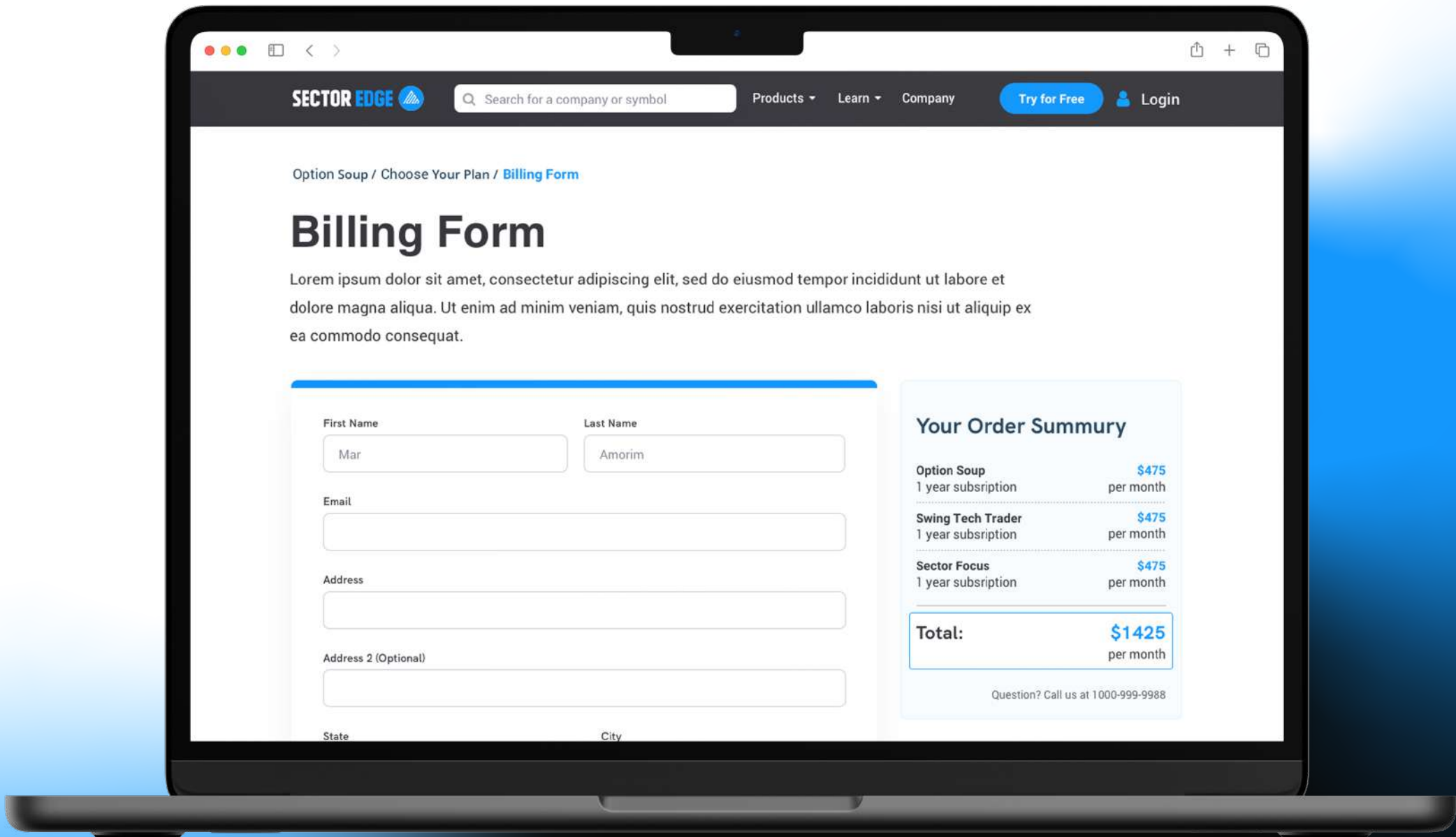
PROJECT OVERVIEW

Summary

Our partner, a U.S.-based finance company, initially approached us to redesign their website. Their platform combined educational resources with stock market insights but was built on outdated technology and offered limited options for managing content.

After a thorough analysis, our team proposed a more strategic, future-ready solution — one that improved usability and supported long-term growth.

What began as a design refresh grew into a full-scale rebuild, including cloud migration, a custom stock data pipeline, and a tiered subscription model. The result is a scalable, secure platform that delivers tailored insights, account access, and smooth performance for over 4,000 users.



Provided services

- Web development
- Project management
- QA and Software testing
- DevOps services
- Data science and analytics
- Business analysis
- UI/UX design

Technologies & tools

- **Frontend:** Vue.js 2, Vuex, Vue Router, Vuetify, AG Grid, Axios, Swagger
- **Backend:** PHP, Laravel, MySQL, Scala, Play Framework, Spark
- **DevOps:** Docker, Git, AWS (RDS, ECS, Codebuild, Route53), Bash, Python, Terraform, Bitbucket
- **Additional tools:** Zephyr, Jira, Postman, Google docs

REQUIREMENTS & CHALLENGES

When our partner’s initial request to redesign their website turned into a full-scale digital overhaul, we proactively transformed the platform's architecture, infrastructure, and features to address their new goals, including improved scalability, data ownership, and the introduction of a tiered subscription model.

Following the discovery phase, their team also decided they needed to replace their stock market data provider, which delivered pre-packaged investment insights, with a raw data source delivered via API. This shift would let them create their own data processing system, interpret the information in-house, and offer customized recommendations for different subscription tiers.

The project's scope expanded to introduce a new set of requirements, including:

Scalable architecture

Build a solution capable of supporting frequent content updates, increased traffic, and flexible integrations.

Stock market data ownership

Switch from embedded third-party stock market data to raw data access and build a custom system to run calculations, support flexible historical views, and validate data in-house.

Infrastructure migration

Move to a cloud-based environment (AWS) for improved stability, automation, and high availability.

Content-driven CMS

Implement a headless CMS to simplify and standardize content delivery across front-end channels.

Internal management tools

Develop an admin panel to track analytics, monitor user subscriptions, and content.

Subscription-based accounts

Implement a flexible user access model based on subscription tiers (instead of a simple authorized/non-authorized structure) to deliver stock recommendations via newsletters and the website.

HOW WE WORK



Collaboration approach & process

To better handle evolving requirements, our team suggested following **Scrum methodology**. Throughout our collaboration, one of our partner’s U.S.-based **Product Owners** was highly involved — **attending all sprint demos, validating features**, and regularly presenting **new requirements** to our team. And more of their developers worked closely with our team throughout the project, contributing domain knowledge and technical insights. Their long-term familiarity with the product added **valuable context** that helped us **refine and tailor solutions** more precisely.

Our teams communicated with each other on a **daily basis** for **transparency, quick feedback loops**, and **fast adaptation to changes** throughout development.

STEP-BY-STEP PROJECT FLOW



Discovery phase

We began by thoroughly analyzing our partner's WordPress website and business goals to identify technical limitations, scalability concerns, and gaps in content management. Our business analyst (BA) worked closely with their team to refine requirements and translate them into clear, actionable tasks for the design and development teams. All requirements, workflows, and technical specs were documented and regularly updated in a centralized collaboration space shared with our partner's team.

UI/UX audit and design

Our design team conducted a usability audit and competitor research to better understand the needs of the target audience — self-directed investors. Once designers received requirements from our BA, the team created wireframes, mockups, and an interactive prototype to verify the plans aligned with our partner's vision. Based on their feedback, we refined the designs and finalized a user-friendly interface. The result was an intuitive, convenient platform that attracts new users and invites them to plan investment strategies, watch webinars, enroll in courses, and more.



Infrastructure and DevOps setup

Their platform's server infrastructure was based on monolithic architecture that limited its functionality and created challenges for deployment and delivery. It also prevented their team from scaling further. To address these issues, we migrated the system to an AWS environment and set up a scalable infrastructure using Terraform and Docker. Our team redesigned the architecture to separate frontend and backend repositories, supported by CI/CD pipelines for efficient delivery.

Backend and frontend development

Our development team rebuilt the website from scratch using modern technologies like Laravel, Vue.js 2, and Vuetify. We implemented data grids to handle high-volume table rendering with filtering, sorting, and dynamic updates — all designed for fast load times and smooth interaction. To simplify content management, we added a headless CMS and built a custom frontend so the partner's team can manage updates without touching the code. Following best practices, we thoroughly tested the platform to ensure security, scalability, and compliance with authentication, reporting, and legal requirements.



STEP-BY-STEP PROJECT FLOW

Stock market data pipeline implementation

Our partner needed to gain full control over how investment data is calculated, validated, and delivered by moving away from pre-packaged third-party stock market insights. To support this, our team developed a custom data loader consisting of two main components. The first processes large volumes of financial data, fetches end-of-day stock prices daily via a third-party Java SDK, performs complex calculations (such as indexes, benchmarks, and sector rankings), and stores them in a MySQL database. The second component manages secure access to this data and exposes it to platform services via a custom API, allowing tailored delivery based on subscription tier. Both components were developed using Scala, containerized with Docker, and deployed in our partner's AWS environment.

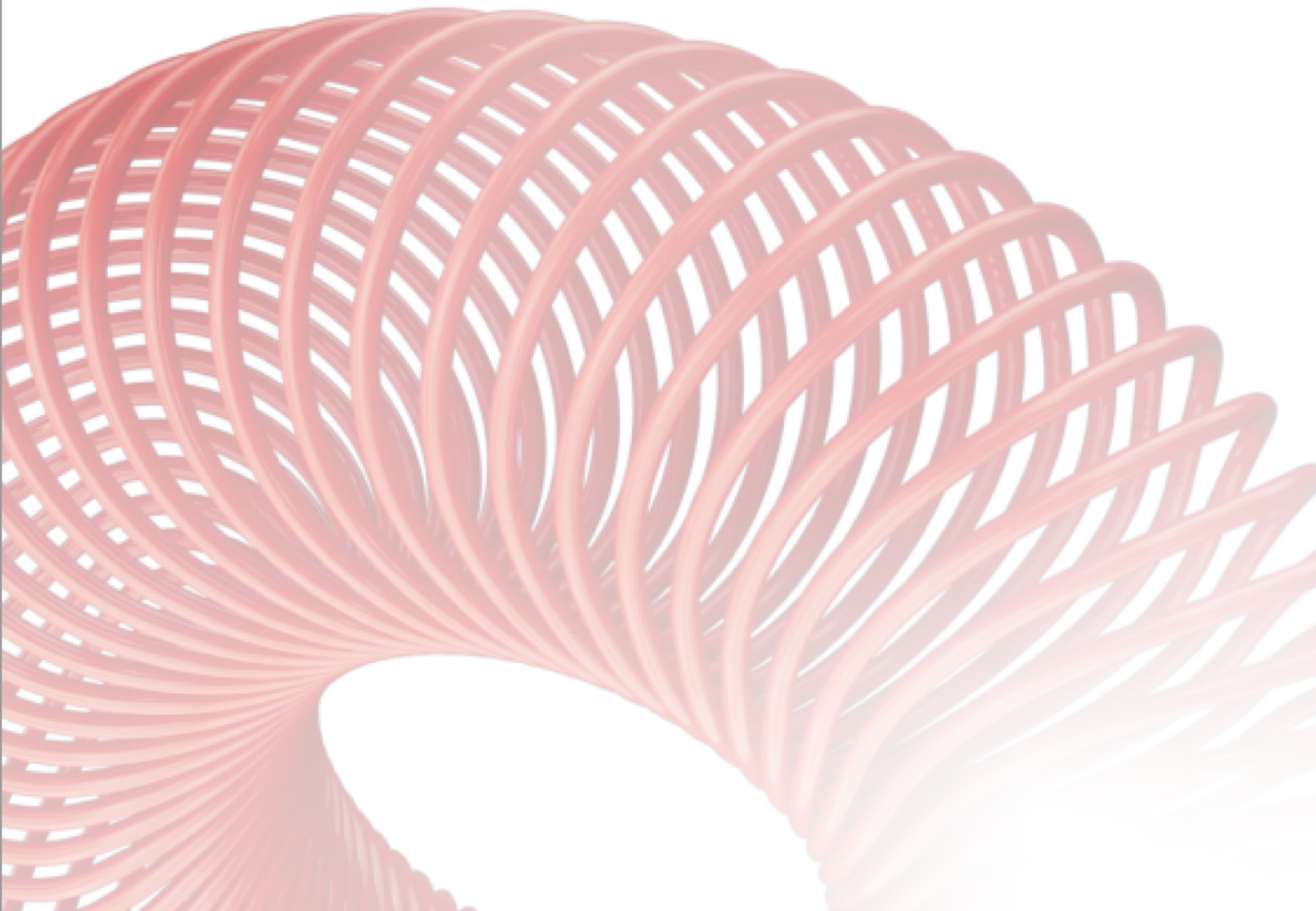


Marketing Hub development

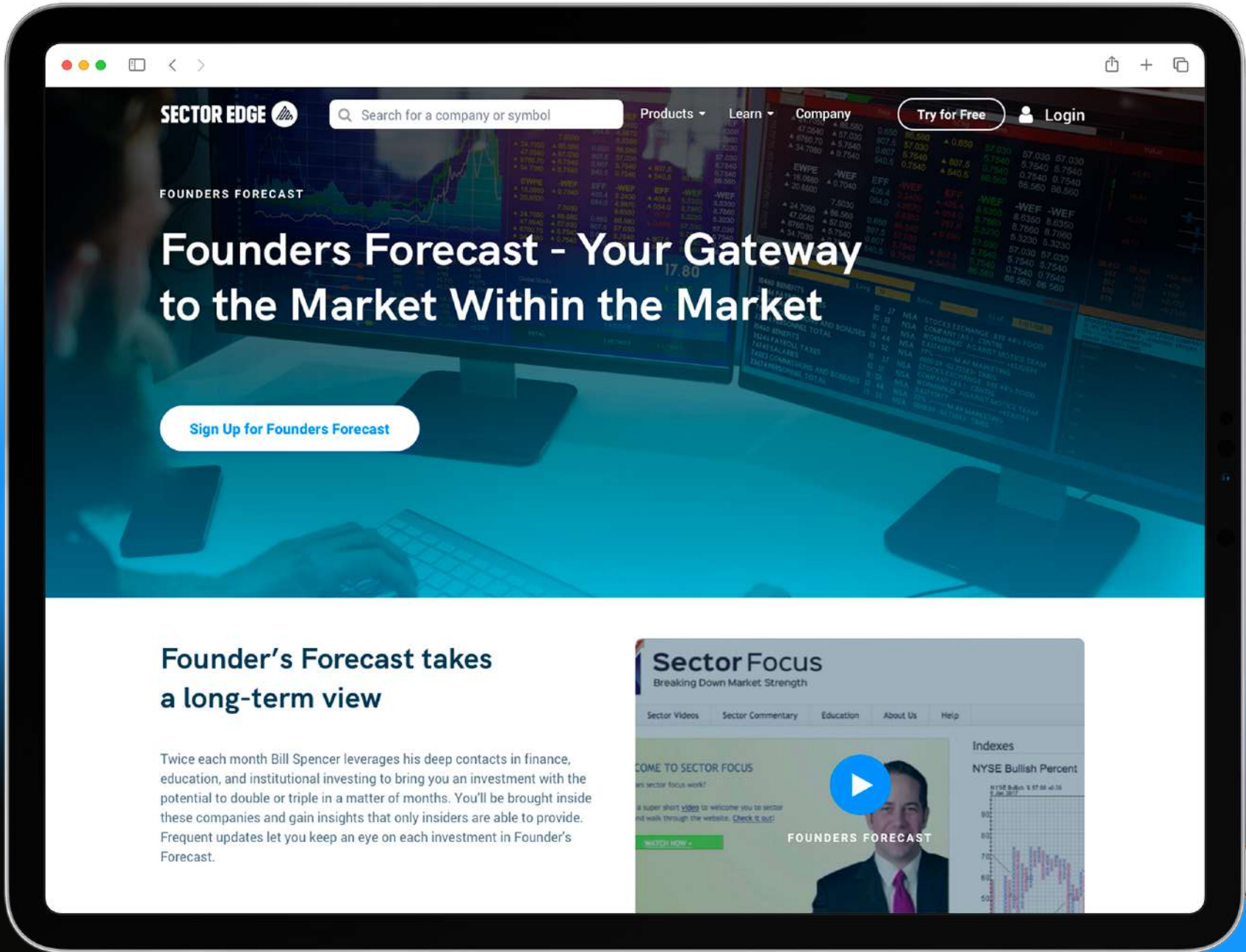
We built a dedicated admin panel to help our partner's internal team manage subscriptions, track content distribution, and monitor user activity on the platform. It also supports advanced marketing workflows, enabling their team to segment users, schedule communications, and analyze engagement — all in one place.

QA and testing

Our QA team conducted manual, functional, regression, integration, and cross-browser testing, working closely with business analysts to validate against requirements. In total, 92% of the platform's functionality was covered with test cases, minimizing the risk of undetected bugs and system failures. As a result, their platform easily supports more than 4,000 concurrent users without performance issues.

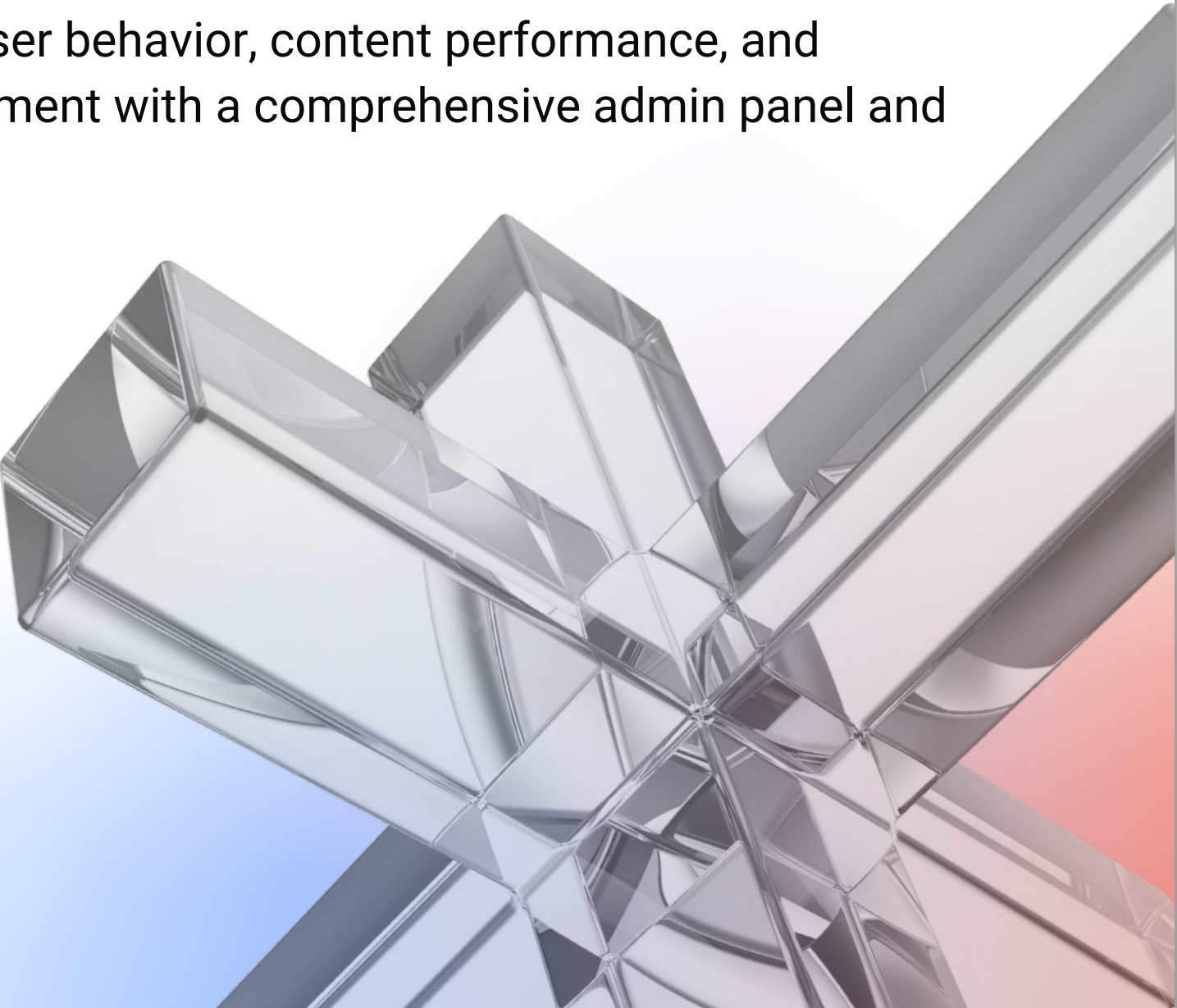


DELIVERED FUNCTIONALITY



- **Custom stock market data processing pipeline:** A backend system for collecting and processing raw market data, enabling our partner to deliver tier-specific insights to subscribers, track historical performance, and validate data quality internally.
- **Headless CMS for content management:** Integrated a headless CMS for fast, flexible content updates without modifying the frontend.
- **Marketing Hub (admin panel):** Internal tool for tracking content distribution, user subscriptions, and analyzing platform engagement metrics.
- **Scalable, cloud-native architecture:** A fully rebuilt, AWS-hosted platform capable of supporting 4,000+ concurrent users and future growth.
- **Personalized investment experience:** Users access content and recommendations based on their subscription tier, with interactive tools to explore data, like stock performance and pricing trends, and plan investments. The platform's logic supports multiple tiers tied to specific billing and access rules, fully integrated with their payment system.

PROJECT OUTCOMES

Stable performance under peak load Better scalability and stability to handle 4,000+ simultaneous users and future growth after transitioning from a monolithic WordPress setup to a cloud-based infrastructure. Higher user retention and interaction Improved user engagement with educational content and a redesigned interface and that makes the platform more interactive for self-directed investors and increases user retention. Technology independence Full ownership over how data is processed and presented with a custom-built stock market data system.	Infrastructure improvements Reduced risk and improved performance by moving to AWS and using containerized architecture to increase uptime and make the platform faster during peak loads. Operational efficiency Better visibility into user behavior, content performance, and subscription management with a comprehensive admin panel and marketing hub. 
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aimprosoft

contact@aimprosoft.com