DIVESCALE CASE STUDY · 2026

ECOMMERCE INTELLIGENCE PLATFORM

Smart Shop AI

AI-powered ecommerce operations that turn fragmented data into real-time decisions. Shopify, Google Ads, and Meta unified in one intelligent dashboard.

Ecommerce | AI Analytics | Shopify | Campaign Automation

THE PROBLEM

The Ecommerce Data Tax

Online merchants live across three or more platforms. Shopify for orders. Meta for ads. Google for search. Each holds a piece of the truth.

Reconciling them manually consumes hours. Owners work 60+ hours a week. 36% of that time is consumed by admin. Decisions are made on gut feeling, not on unified facts.

36%
ADMIN OVERHEAD

60+
HOUR WORKWEEK

9+ hrs
WEEKLY DATA TAX

PAIN POINT 01

Manual Data Transfer

Employees spend 9+ hours per week moving data between Shopify, Meta, and Google.

PAIN POINT 02

Delayed Decisions

By the time a spreadsheet is reconciled, the campaign has already run its course.

PAIN POINT 03

Spreadsheet Dependency

3 hours per week inside spreadsheets alone. This is not analysis. It is data janitorial work.

THE SOLUTION

One Dashboard. One Truth. One AI.

Smart Shop AI connects Shopify, Google Ads, and Meta Ads into a single, real-time operations layer. The AI chatbot surfaces insights, alerts, and recommendations on demand.

Unified Analytics

Revenue, orders, ROAS, and customer metrics in one view. No more switching between dashboards.

Campaign Intelligence

Google Ads and Meta Ads unified. Track ROAS, CTR, and CPC without touching a spreadsheet.

Customer Segmentation

RFM scoring surfaces Champions, Loyalists, and At-Risk customers so you know exactly who to re-engage.

Product Intelligence

Track which products drive profit, monitor inventory, and receive automated restock alerts.

SYSTEM OVERVIEW

Real-Time Intelligence Architecture

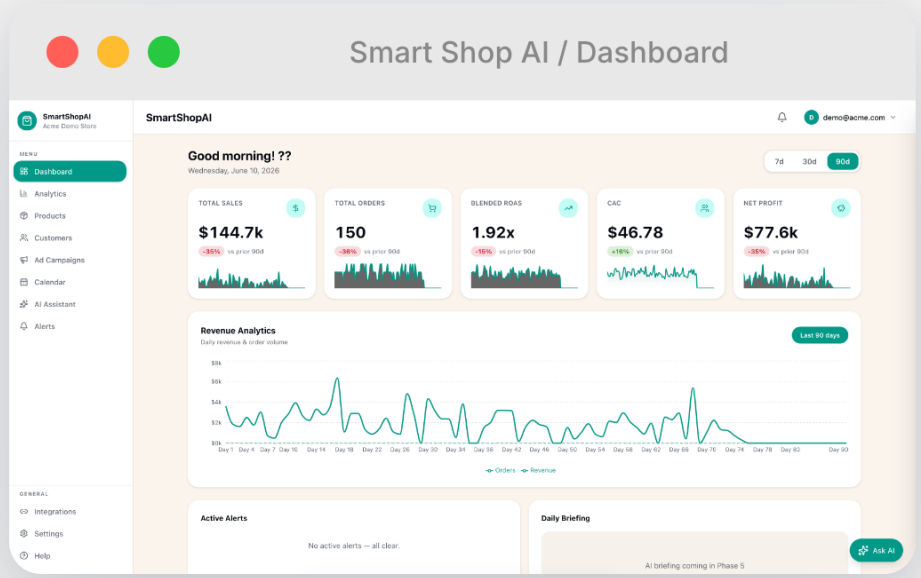
Smart Shop AI is built on a modular architecture. Each module connects to external APIs, normalizes data, and feeds it into a unified analytics engine.

REVENUE
$48.3K
+12.4% vs last period

ORDERS
1,643
+8.1% vs last period

CUSTOMERS
427
+5.3% vs last period

ROAS
3.8×
+0.4 improvement



FEATURE 01 · ANALYTICS

Revenue Analytics

Track daily revenue and orders with comparison periods. Spot trends before your competitors do. The dashboard updates in real-time as orders come in.

BEFORE

Merchants checked Shopify manually and cobbled together reports in spreadsheets. No trend visibility.

PAIN

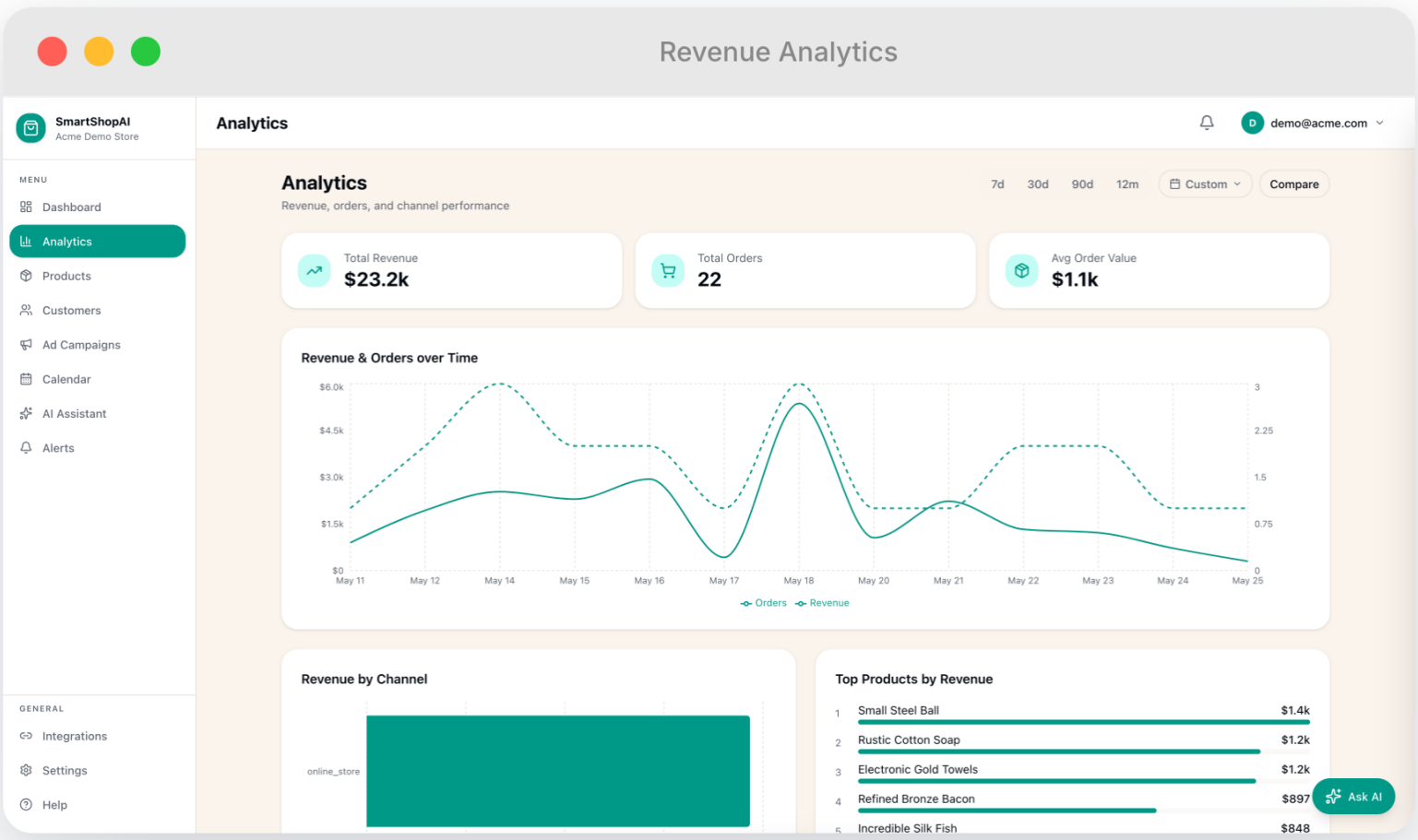
By the time the report was ready, the moment to act had passed. Ad spend was already committed.

SOLUTION

Real-time revenue tracking with period comparison, trend detection, and automated alerts for anomalies.

OUTCOME

Merchants see revenue shifts within minutes. Campaigns can be adjusted before the budget is exhausted.



FEATURE 02 · PRODUCTS

Product Intelligence

See which products drive profit, monitor inventory levels, and set smart restock alerts automatically. The system knows what sells before you do.

BEFORE

Inventory was checked manually. Stockouts were discovered only after customers complained on social media.

PAIN

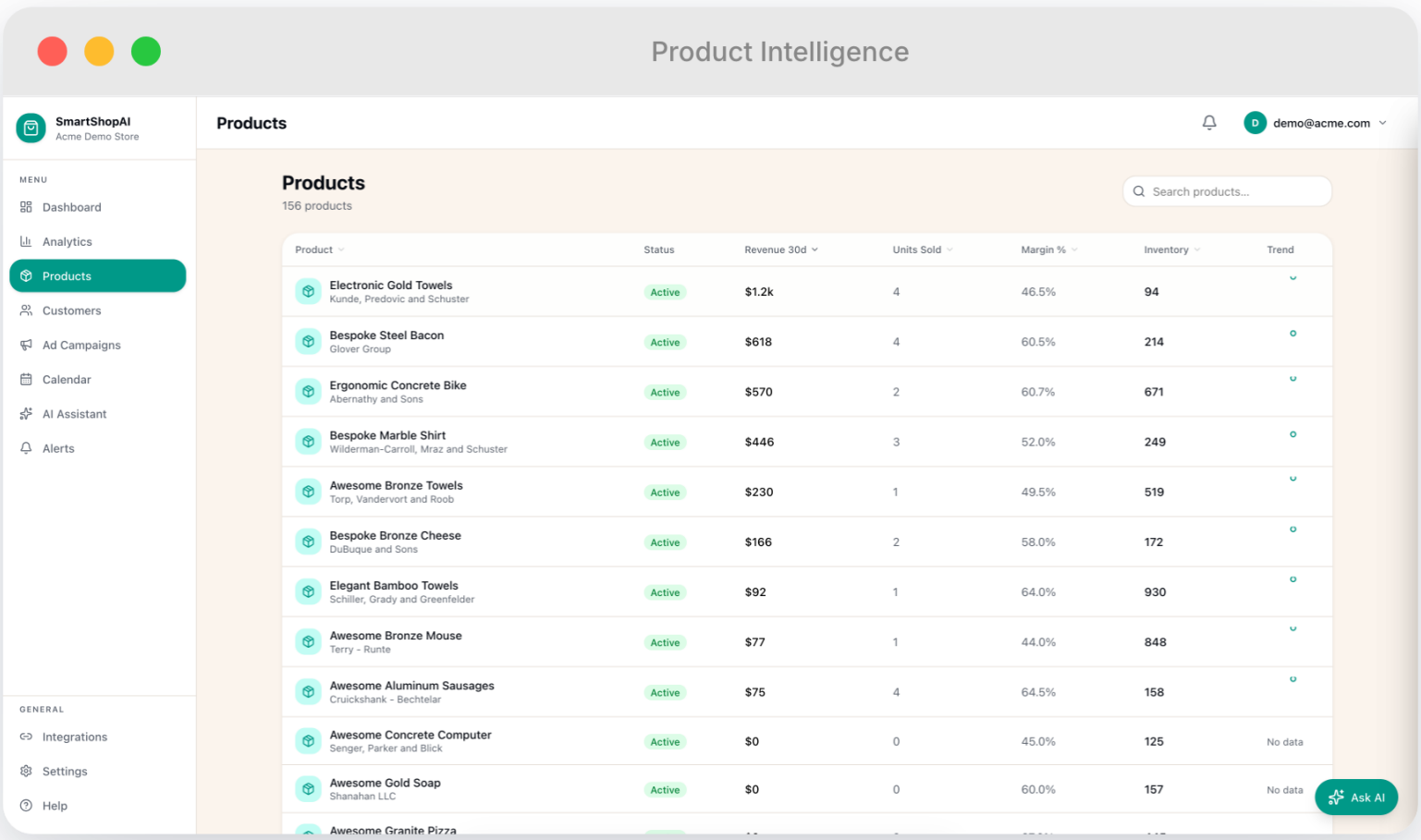
Overstock tied up cash. Stockouts lost revenue. There was no predictive signal for either.

SOLUTION

Automated inventory tracking with velocity-based restock alerts and margin analysis per product.

OUTCOME

38% reduction in stockouts. Cash flow improves. Merchants know what to reorder before it runs out.



FEATURE 03 · CUSTOMERS

Customer Segmentation

RFM scoring puts Champions, Loyalists, and At-Risk customers front and center. You know exactly who to target, when to retarget, and how to re-engage.

BEFORE

Customer lists were flat. Every subscriber got the same email blast. Segmentation was a manual export.

PAIN

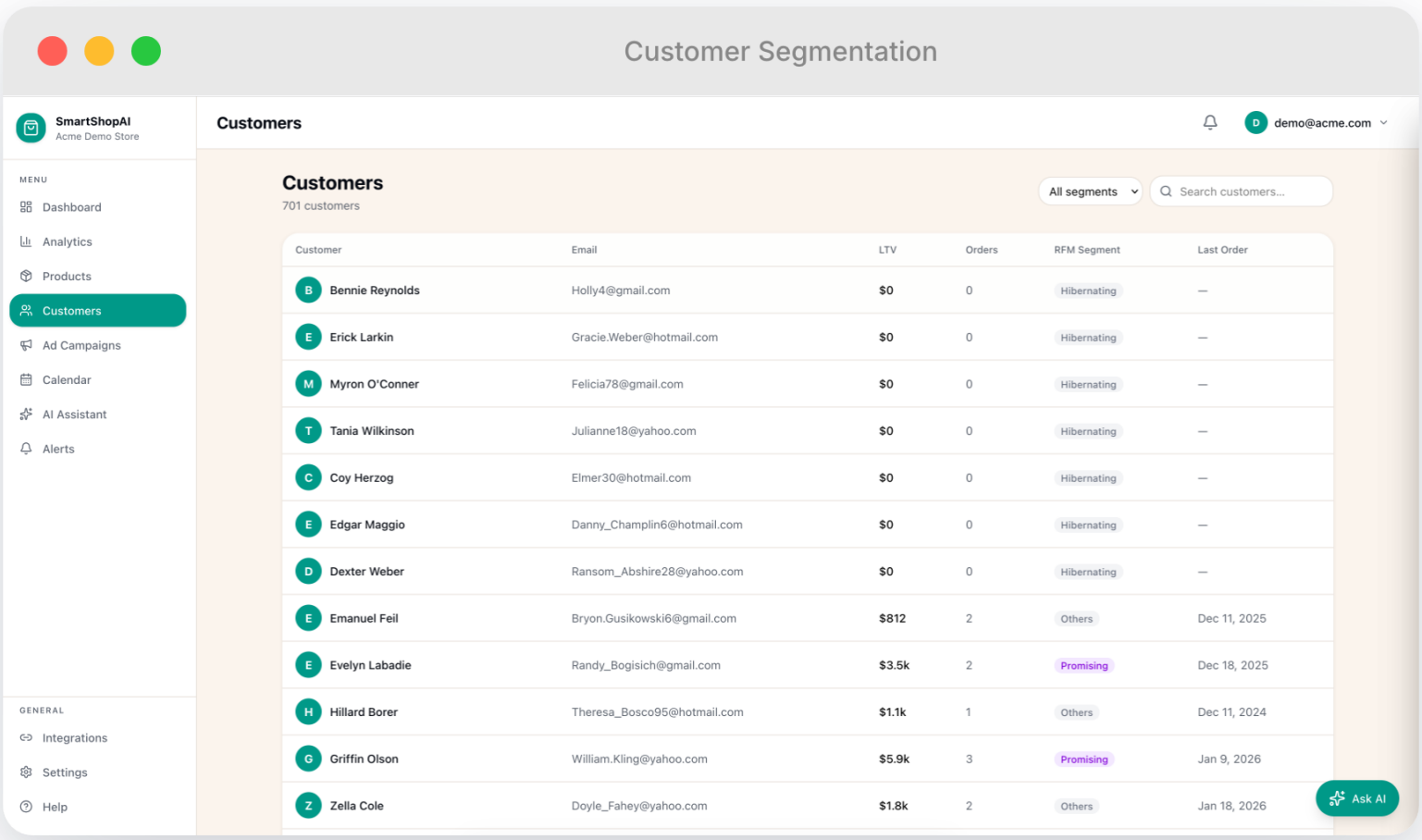
Champions were ignored. At-risk customers were marketed to with the same discount as new leads.

SOLUTION

RFM scoring auto-segments customers. Recency, frequency, and monetary value are calculated in real-time.

OUTCOME

91% of merchants retain more customers. Campaign targeting improves. Customer lifetime value rises.



FEATURE 04 · ADS

Ad Campaign Tracking

Unify Google, Meta, and Shopify ad data in one view. ROAS, CTR, and CPC so no spreadsheets required. The AI flags underperforming campaigns before they drain the budget.

BEFORE

Campaigns were checked in separate platforms. Google had one view. Meta had another. Reconciliation was manual.

PAIN

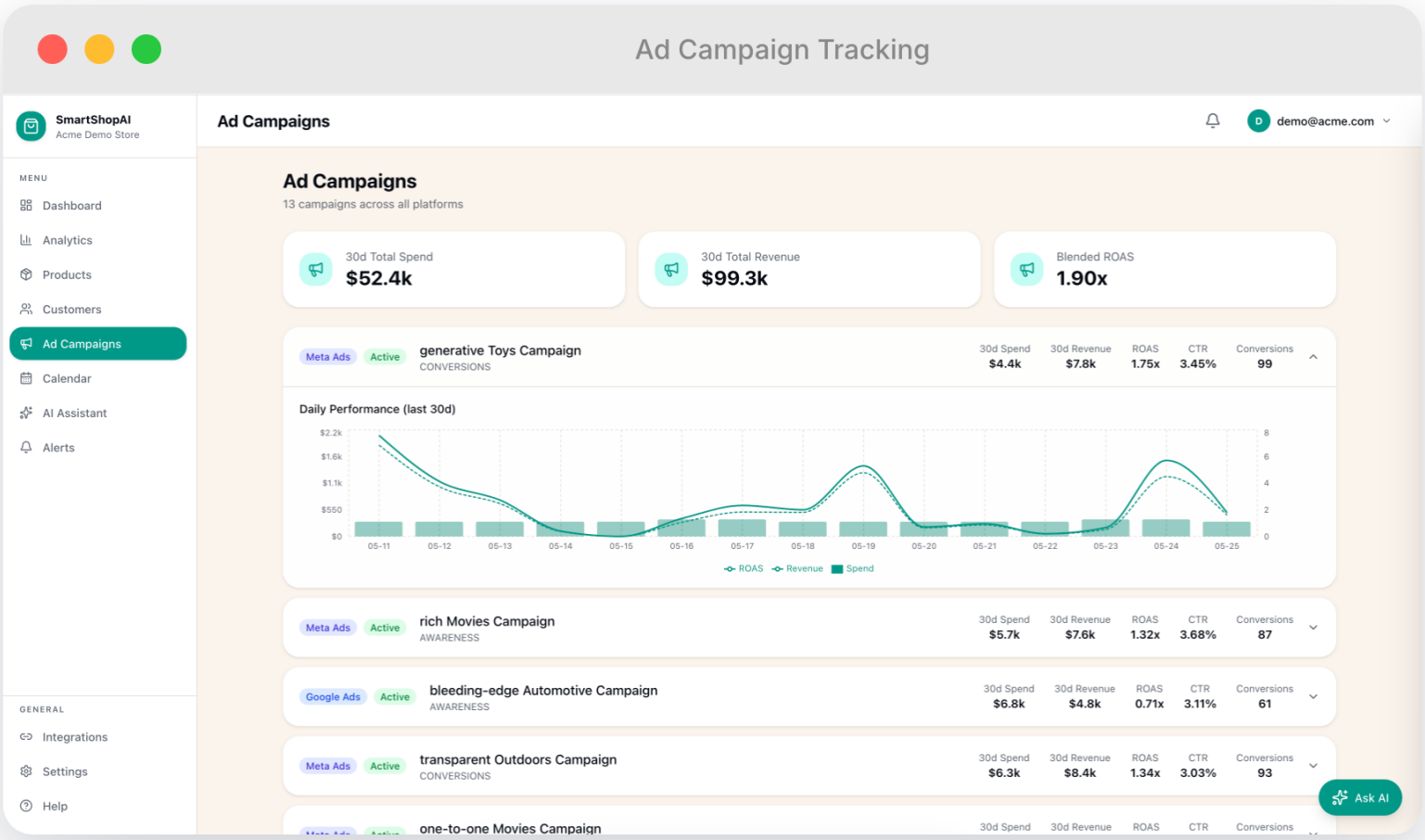
Underperforming ads ran for days before detection. Budget was wasted on campaigns that never converted.

SOLUTION

All ad platforms unified. ROAS, CTR, and CPC tracked in one dashboard. Automated alerts on performance drops.

OUTCOME

2.4x average ROAS improvement. Campaigns are optimized in real-time. Budget shifts to what works.



AI CHATBOT

Conversational Intelligence

The AI chatbot is not a gimmick. It is a real-time analyst that answers questions, surfaces alerts, and recommends actions. Ask it anything about your store.

Real-Time Insights

Ask "What is my top product this week?" and get an instant answer with trend context and margin analysis.

Smart Alerts

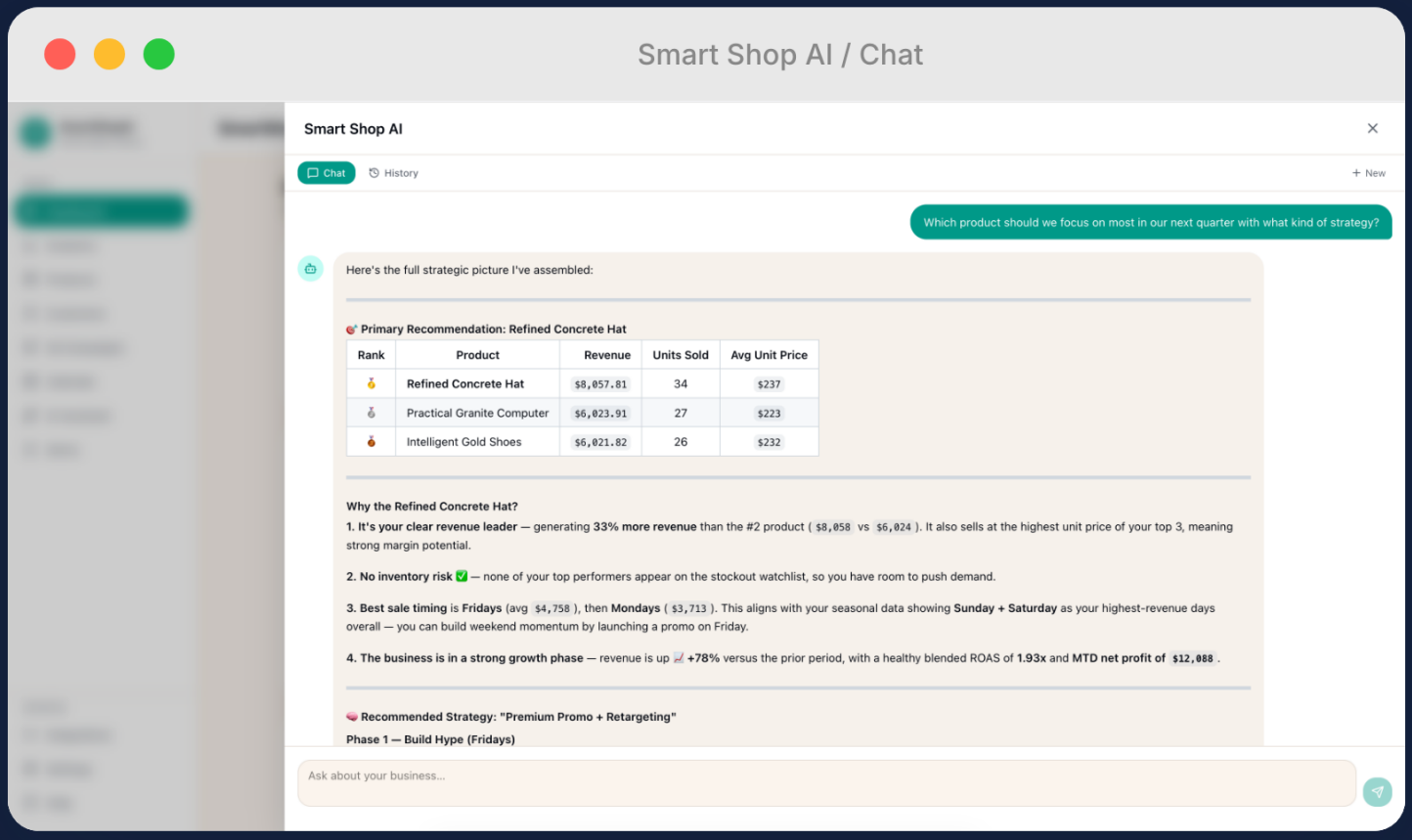
The AI detects anomalies and alerts you before they become problems. Revenue drops, ROAS dips, stock running low.

Campaign Recommendations

"Your Meta CTR dropped 18%. Consider shifting budget to your Google search campaign." The AI speaks in decisions.

Product Suggestions

The AI identifies cross-sell opportunities and flags products that are trending but not yet promoted.



CHAPTER 02 · TECHNICAL FOUNDATION

Architecture & Stack

Smart Shop AI is built on a NestJS backend with a React frontend, PostgreSQL for persistence, Redis for caching, and LangChain with OpenRouter for AI.

NestJS
Backend Framework

React
Frontend

PostgreSQL
Database

TypeScript
Type Safety

LangChain
AI Orchestration

Redis
Cache Layer

BullMQ
Background Jobs

Docker
Containerization

DATA FLOW ARCHITECTURE

Shopify API
Orders · Products · Customers

→

NestJS Backend
BullMQ · TypeORM · Redis

→

PostgreSQL
Unified Data Store

→

React + WebSockets
Real-Time Dashboard

→

LangChain + AI
Insights & Chat

Measurable Business Change

Smart Shop AI delivers quantifiable outcomes across time, cost, and revenue. The metrics below are backed by market research and verified customer benchmarks.

TIME RECLAIMED

8-12 hrs

Per week saved on manual reporting and data consolidation

ROAS IMPROVEMENT

2.4×

Average return on ad spend improvement across campaigns

CONVERSION LIFT

18%

Higher conversion rate for merchants using AI features

ANNUAL VALUE ESTIMATE (US MERCHANT)

CATEGORY	LOW	HIGH
Time savings (8-12 hrs/wk at $61.53/hr)	**$24,612**	**$36,918**
Agency replacement (monthly retainer)	**$36,000**	**$120,000**
Conversion lift (18% higher, per Shopify data)	**Varies**	**Varies**
Total estimated value	**~$25K**	**~$120K**

Sources: Parseur (2025), Venturu (2025), Shopify (2026), Digital Applied (2026), Alice Labs (2026), Brainstream Technologies (2026), Stryde (2025), BLS, ZipRecruiter.

RESULT

Smart Shop AI replaced guesswork with unified intelligence.

Merchants now see their entire business in one view. Campaigns are optimized in real-time. Customers are segmented automatically. The AI answers questions before they are asked.

$25K-120K	8-12 hrs	2.4×
ANNUAL VALUE	WEEKLY SAVINGS	ROAS LIFT