Data-Driven Competitive Intelligence: Machine Learning Application in Market Analysis

BUSINESS MODELING

PAOLA KATHERINE CARDOSO PACHECO

Advisor: Afonso Henrique Corrêa de Sales

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SUMÁRIO

1. COMPANY OVERVIEW

Insight4You 4me is a startup founded in 2025 by three experienced professionals from the fields of data science, marketing, and strategic management. Based in Canada, the company was created to democratize access to data-driven competitive intelligence, offering innovative solutions that help businesses anticipate market trends and make strategic decisions based on real data collected from the internet — thereby avoiding failed investments, unnecessary product costs, and misguided strategic decisions.

The founders of Insight4You are:

Paola Katherine, a software development graduate with a specialization in Big Data, focusing on AI and Data Science. She has extensive experience in data analysis, web scraping, and predictive model development for the market.

Jane Doe, a digital marketing and consumer behavior specialist with over 10 years of experience in branding and market positioning.

John Doe, a software engineer focused on scalable solutions and cloud computing. He is responsible for the technological infrastructure development within the company.

Insight4You operates at the intersection of technology and strategy, offering a digital platform that integrates web scraping, sentiment analysis, price and trend prediction, using machine learning and artificial intelligence. The company's differentiator lies in its ability to turn large volumes of unstructured data into clear, actionable insights for decision-making across businesses of different sizes and sectors.

This work presents, in addition to the business model, a functional prototype of the Insight4You platform. The application uses fictitious data for demonstration

purposes only. The source code and a video demo of the interface are available in the annex.

2. SERVICE DESCRIPTION

Insight4You offers a digital platform for data-driven competitive intelligence designed for companies seeking to better understand their competitors, market trends, and consumer behavior — enabling product development, launches, and strategy creation. The solution combines **web scraping, machine learning, and data visualization** technologies to deliver real-time actionable insights using the latest market data.

The platform operates as a subscription-based service, where users define keywords, brands, or categories of interest. Based on these settings, the tool collects data from e-commerce websites, social media platforms, and complaint forums, processes the information, and displays visual analysis through interactive dashboards and automated reports.

Key features include:

1. **Sentiment analysis** on products and brands across social media and forums;

2. **Real-time monitoring** of competitor pricing and promotions;

3. **Demand forecasting** using time series and consumer behavior;

4. **Automated customer segmentation** using public data;

5. **Custom alerts** and notifications about relevant market changes.

Clients access the platform via a secure web browser, with the ability to generate personalized reports, configure alerts, and export data for integration with other tools (e.g., Power BI, Tableau).

While the solution is automated, Insight4You's technical and analytical team provides support to interpret the data and tailor the platform to each client's needs.

3. CUSTOMER SEGMENTATION

Insight4You targets companies in highly competitive markets with strong digital presence, particularly in the e-commerce, technology, marketing, consumer goods, and retail sectors. The ideal clients are organizations aiming to gain strategic advantage through market analysis and competitor monitoring.

Main customer profiles include:

1. **E-commerce businesses**: interested in real-time tracking of prices, promotions, and reviews of competitors;

2. **Startups**: needing market insights to position their products effectively;

3. **Marketing and branding agencies**: using data to support campaigns and positioning decisions.

Segmentation is based on criteria such as industry, digital presence, data analysis maturity, and interest in innovative tech solutions. Insight4You offers scalable plans to serve small growing businesses as well as large corporations with complex operations and high demand for market intelligence.

4. VALUE PROPOSAL

Insight4You delivers accessible, reliable, and actionable market intelligence, using cutting-edge technology to convert public and unstructured data into strategic knowledge.

Through the platform, clients receive:

1. **Faster**, evidence-based decision-making;

2. **Reduced risks** when launching products or repositioning brands;

3. **Ongoing monitoring** of competitors and consumer behavior changes;

4. **Time and cost savings** through automated data collection and analysis;

5. **Trend forecasting** with predictive models trained on real data.

By combining web scraping, machine learning, and intuitive visualization, Insight4You empowers companies to make better-informed decisions, enhancing competitiveness and adaptability. The true value lies not just in data access, but in its intelligent, practical, and personalized interpretation.

Insight4You concentrates a high volume of data, which generates better results and delivers valuable and accurate insights to companies.

5. COMMUNICATION AND DISTRIBUTION CHANNELS

Insight4You uses a multichannel approach to ensure efficient reach during acquisition and post-sale phases. The channels are designed to promote brand awareness, enable platform trials, support service acquisition, and provide ongoing user assistance.

1. **Communication Channels:**

   - **Social media** (LinkedIn, Instagram, Twitter) for educational content and news;

   - **Blog with inbound marketing** content to attract qualified leads;

   - **Email marketing** and newsletters for updates and trend sharing;

   - **Participation in tech events and expos** to increase visibility and build partnerships.

2. **Distribution Channels:**

   - **Company website** offering free demos and onboarding forms;

   - **Dedicated sales team** for personalized service for large clients;

   - **Integration with client platforms** like Shopify, Amazon, and Mercado Livre.

3. **After Sales and Support:**

   - **In-app chat** support**;**

   - **Help center** with FAQs, tutorials, and videos;

- **On-demand consulting** with the technical team for data interpretation**.**

This integrated channel strategy ensures a seamless customer journey from first contact to retention, enhancing engagement and value delivery.

6. CUSTOMER RELATIONSHIP STRATEGIES

Insight4You adopts customer-centric strategies focused on building continuous and personalized relationships. Engagement begins with the first contact — through human or automated assistance — and extends throughout the customer journey with ongoing support and loyalty efforts.

Adopted strategies include:

- **Personalized onboarding:** guided introduction to the platform, with tutorials and dedicated support during the first weeks of use;

- **Ongoing communication:** regular updates, tips, and feature announcements via email and in-app messages;

- **Customer portal**: exclusive area with access to report history, dashboards, and support tickets;

- **Structured feedback**: periodic collection of user suggestions and perceptions, including Net Promoter Score (NPS) analysis and satisfaction metrics.

These strategies reinforce the platform's perceived value, increase retention, and drive continuous engagement.

7. REVENUE STREAMS AND PRICING

Insight4You follows a monetization model based on monthly or annual subscriptions, offering scalable plans according to company size and data processing volume. The goal is to provide flexibility for both small businesses and large corporations requiring large-scale market intelligence.

Revenue Streams:

- **SaaS subscriptions (Software as a Service):** recurring payments for platform access;

- **Custom data packages:** tailored plans for companies with specific data volume needs;

- **One-time consulting:** custom strategic analyses delivered by the Insight4You team;

- **On-demand reports**: in-depth studies on market trends, competition, or niche segments.

Pricing Strategies:

- **Freemium model:** limited-feature free access to attract new users;

- **Usage-based pricing:** based on dashboards, users, monitored keywords, and integrated data sources;

- **Enterprise plans:** including dedicated support, customized integrations, and exclusive features.

Insight4You's pricing policy is transparent and fully adaptable, allowing businesses to pay according to the value generated. This makes the service more accessible and supports scalable growth.

8. REQUIRED RESOURCES AND CAPABILITIES

To deliver its value proposition and ensure proper platform operation, Insight4You relies on a strong set of both tangible and intangible resources and capabilities.

Required Resources:

- **Technology and infrastructure**: cloud servers (AWS), scalable databases, APIs for external data integration;

- **Qualified technical team**: data scientists, backend and frontend developers, machine learning engineers, and data visualization analysts;

- **Financial resources:** to maintain infrastructure, invest in innovation, and scale operations;

- **Knowledge base and datasets**: access to public and structured data sources (social media, review platforms, etc.);

- **Integrations with market tools**: including CRMs, ERPs, and BI platforms.

Organizational Capabilities:

- **Analytical capacity**: to translate large volumes of data into actionable strategic insights;

- **Adaptability and innovation**: continuous solution updates based on market shifts and customer feedback;

- **Support and service delivery:** structured processes and dedicated teams to help customers interpret and apply generated data;

- **Marketing capability**: to attract, educate, and convert clients based on the solution's value.

These resources and skills are essential to support Insight4You's business model, ensure continuous value delivery, and promote sustainable company growth.

9. KEY ACTIVITIES PERFORMED BY THE COMPANY

Insight4You carries out a range of essential activities to deliver its value proposition and maintain an efficient and competitive operation.

Key activities include:
- **Automated data collection**: developing and maintaining web scraping scripts to gather information from e-commerce sites, social media, and complaint portals;

- **Data processing and transformation**: cleaning, standardizing, and structuring raw data;

- **Predictive model development**: applying machine learning techniques to identify patterns, forecast trends, and generate strategic insights;

- **Creation of dashboards and customized reports**: designing intuitive interfaces for clients to visualize and interpret their data;

- **Technical support and analytical consulting**: assisting clients directly with interpreting results and applying insights in business strategies;

- **Content marketing and commercial outreach**: creating educational materials, running digital campaigns, and participating in events to attract new clients and strategic partners;

- **Ongoing technology updates**: researching and developing new features, adapting to data source changes and market requirements.

These activities are executed by multidisciplinary teams combining technical expertise, market insight, and customer focus, ensuring Insight4You's operational and strategic success.

10. STRATEGIC PARTNER NETWORK

Insight4You acknowledges the importance of strategic alliances to strengthen its operations, expand its reach, and accelerate value delivery. A strong partner network allows access to resources, technology, know-how, and markets that enhance the business model.

Key strategic partners:
- **Tech companies and specialized APIs:** providing structured data to enrich the platform's sources;
- **Marketing agencies and business consultants:** acting as distribution channels and also using the solution to add value to their services;
- **Universities and research centers:** co-developing market studies, promoting innovation, and attracting skilled talent;
- **Integration and automation platforms (e.g., Shopify, CRMs)**: increasing compatibility with clients' internal systems.

Types of collaboration:
- **Commercial and distribution partnerships**: to expand the platform's presence in specific niches and strategic regions.

This partner network ensures greater agility and technological support for Insight4You, while fostering shared value creation and sustainable growth.

11. COMPANY COST STRUCTURE

Insight4You's cost structure includes both initial investments and recurring operational expenses that support platform development, maintenance, and scalability. Efficient cost management is essential for financial sustainability.

Fixed Costs:

- **Cloud infrastructure:** fees for hosting, storage, processing, and security services (e.g., AWS);
- **Payroll:** salaries for technical, commercial, support, and administrative staff;
- **Software licenses:** development, data analysis, BI, and automation tools;
- **Marketing and communication:** content production, paid ads, institutional campaigns, and event participation;
- **Administrative costs:** accounting, management platforms, and operational overhead.

Variable Costs:

- **On-demand services:** consulting, custom reports, and client-specific adaptations;
- **Data source expansion:** subscriptions to additional sources or premium APIs;
- **Training and development:** workshops, courses, and team qualification events;
- **Commissions and commercial partnerships:** indirect sales compensations through external channels.

Initial Investments:

- **Platform and MVP development:** R&D, interface design, and feature validation;

- **Market validation:** testing with real users and adaptation based on feedback;
- **Brand registration and legal setup:** formalizing the business, contracts, and IP protection.

Insight4You's cost structure is designed to support a lean, scalable, and remote-first operation, enabling progressive growth with financial control and continuous innovation.

REFERENCES

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ANNEXES

- **Complete project source code (GitHub):**

  https://github.com/PKpacheco/mba_puc_project

- **Video demonstration of the Insight4You platform:**

https://youtu.be/AYfS3paAjFo