Pricing Analytics on Azure

About Sigmoid

Sigmoid is an emerging leader in data engineering and AI solutions.

750+
Employees

Work with **30+**
Fortune 500 firms

>97%
CSAT score

200+
ML models operationalized

5000+
Data pipelines built

Backed by

SEQUOIA

Awards and Recognition

500™ Technology **Fast 500**
2023 NORTH AMERICA
Deloitte.

iSG | Provider Lens — 2023 Quadrant
Analytics Services
Rising Star, U.S. ⭐
Report releasing Jan 2024

Inc. 5000
America's Fastest-Growing Private Companies

DATA BREAKTHROUGH AWARD 2021
Open Source data solution provider of the year

FORRESTER
Now Tech:
AI Consultancies,
Q1, 2021 Report

Major Contender in
EVEREST GROUP
Analytics and AI Services Specialists
PEAK Matrix (2022)

Offices
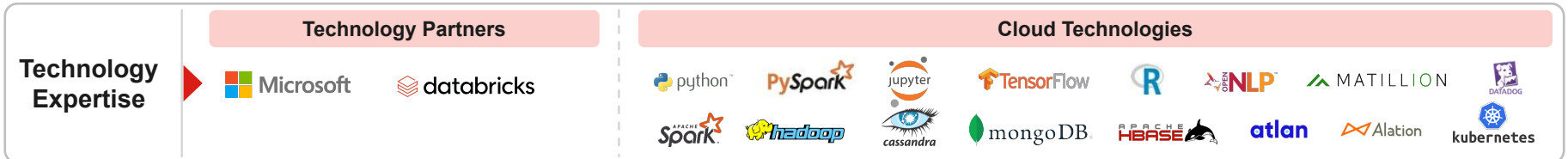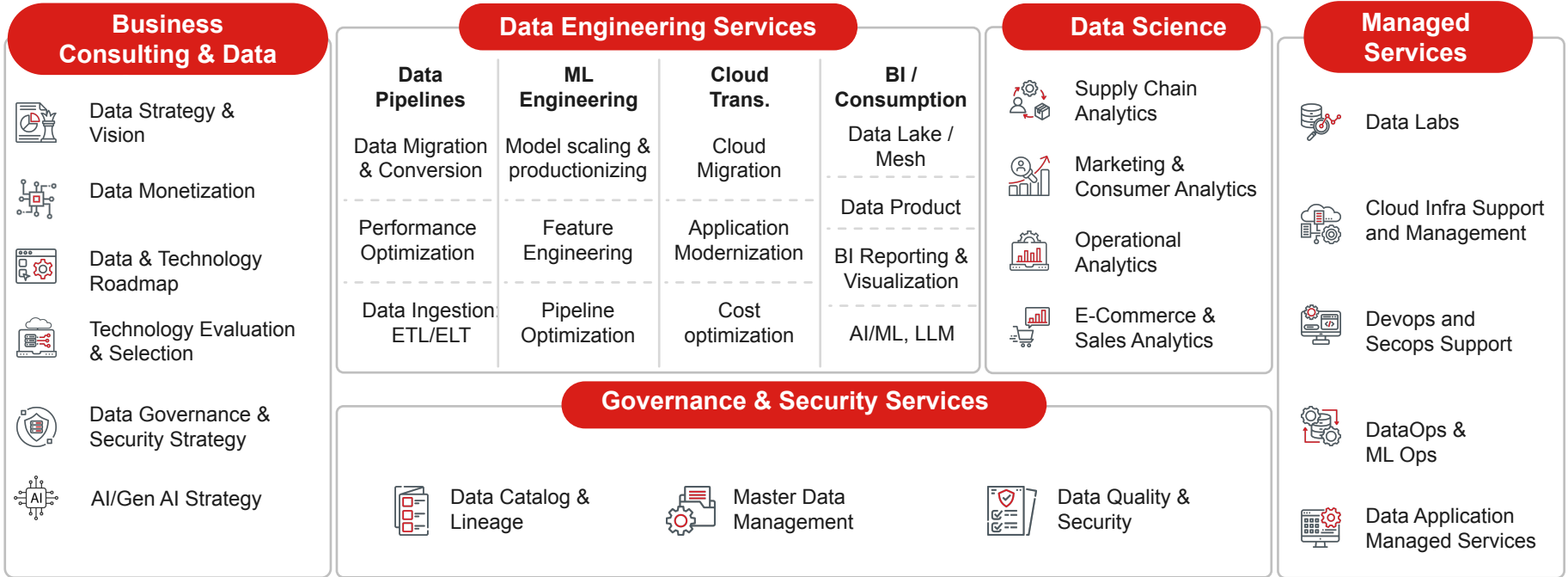New York | San Francisco | Dallas | Lima | Bangalore | Amsterdam | London | Sao Paulo

SIGMOID

Enabling Business Transformation with Full-Service Capability Suite

Business Consulting & Data

- Data Strategy & Vision
- Data Monetization
- Data & Technology Roadmap
- Technology Evaluation & Selection
- Data Governance & Security Strategy
- AI/Gen AI Strategy

Data Engineering Services

Data Pipelines	ML Engineering	Cloud Trans.	BI / Consumption
Data Migration & Conversion	Model scaling & productionizing	Cloud Migration	Data Lake / Mesh
Performance Optimization	Feature Engineering	Application Modernization	Data Product
Data Ingestion ETL/ELT	Pipeline Optimization	Cost optimization	BI Reporting & Visualization
			AI/ML, LLM

Data Science

- Supply Chain Analytics
- Marketing & Consumer Analytics
- Operational Analytics
- E-Commerce & Sales Analytics

Managed Services

- Data Labs
- Cloud Infra Support and Management
- Devops and Secops Support
- DataOps & ML Ops
- Data Application Managed Services

Governance & Security Services

- Data Catalog & Lineage
- Master Data Management
- Data Quality & Security

Technology Expertise

Technology Partners

- Microsoft
- databricks

Cloud Technologies

- python
- PySpark
- Jupyter
- TensorFlow
- R
- OpenNLP
- MATILLION
- DATADOG
- Apache Spark
- hadoop
- cassandra
- mongoDB
- Apache HBASE
- atlan
- Alation
- kubernetes

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Sigmoid Capabilities - Experience in implementing data solutions in Azure

Sigmoid has worked with more than Five large customers to design, build and deploy solutions in Azure

Data Processing & Transformation:

- **Azure Databricks:** Collaborative Apache Spark-based analytics platform to be used for big data processing and machine learning.
- **Azure HDInsight:** Managed cloud service for processing big data using popular open-source frameworks like Hadoop and Spark.

Data Storage & Management:

- **Azure Data Lake Storage:** Scalable and secure data lake for storing large amounts of structured and unstructured data would be considered.
- **Azure SQL Database:** Managed relational database service for structured data storage.

Data Ingestion & Integration:

- **Azure Data Factory:** Creating data pipelines to move and transform data from various sources.
- **Azure Event Hubs:** Real-time data ingestion from applications, devices, or any data streams would be done.

Data Analytics & Visualization:

- **Azure Synapse Analytics:** Analytics service which will be used for analyzing large amounts of data using either serverless or provisioned resources.
- **Power BI:** Business intelligence tool to be used for creating interactive visualizations and reports.

Machine Learning & AI:

- **Azure Machine Learning:** End-to-end platform for building, training, and deploying machine learning models.
- **Cognitive Services:** Pre-built AI services for vision, speech, language, and decision-making.

Security & Compliance:

- **Azure Active Directory:** Identity and access management service.
- **Azure Policy & Blueprints:** Tools for implementing governance and compliance across Azure resources.

Data Products
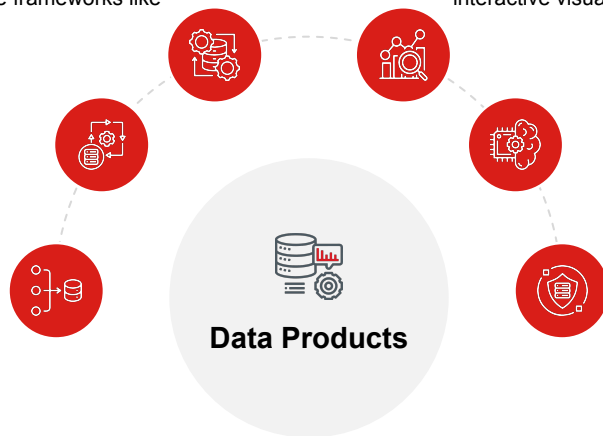
Sigmoid's implementation of solutions in Azure involves leveraging a combination of services and tools tailored to specific business needs. Sigmoid would collaborate between data engineers, data scientists, business analysts, and other stakeholders as it is essential to align the implementation with business goals and ensure success.

Microsoft
Solutions Partner

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Pricing Analytics
Capabilities

4 Pillars - Revenue Growth Management

Revenue Management (RGM) is the application of disciplined analytics that predict consumer behavior at the micro market levels and optimize product availability and price to maximize revenue growth.

RGM Visibility & Business Analytics

Assortment Intelligence

Maintain right mix of products across channels, retailers & geography to optimize across profitability & service levels.

Product Pricing

Identify the optimal pricing model for the product portfolio based on elasticities of price, distribution & weights.

Promotion Management

Develop a balance in promotion activities for the portfolio considering promo sensitivity, its impact on the portfolio & the supply chain.

Trade Term Management

Design process to marry right retailers with right products while identifying apt incentives.

Data Layer

Data Lake ▶ **Ingestion** ▶ **Consolidation** ▶ **Harmonisation** ▶ **Enrichment** ▶ **Consumption**

Process Revaluation

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Challenges observed by Sigmoid

Challenges in Pricing

1 **Lack of quality data**

Inaccessibility to quality data on market, supply chain, inventory acts as a hurdle to make the right pricing decisions

2 **Optimizing everyday prices**

Standard discounts and general promotions rarely yield results as they can be affected by reasons like competitor offers

3 **Large discounts**

Using heavy discount techniques for promoting a product

4 **Price elasticity**

Lack of timely insights into highly elastic and inelastic products can create over or underpricing

Associated Business Impact

Inefficient allocation of sales and marketing budgets turn reducing profitability

Frequent changes to price sensitive products leading to poor customer satisfaction

Mismanaged pricing across various sales channels leading to decreased revenues

Slow response to market changes impacting competitive position

Impact of Analytics

Improved OTIF and on-shelf availability with market intelligence

Insights into customer behavior for data-driven decisions that better align with customer demand
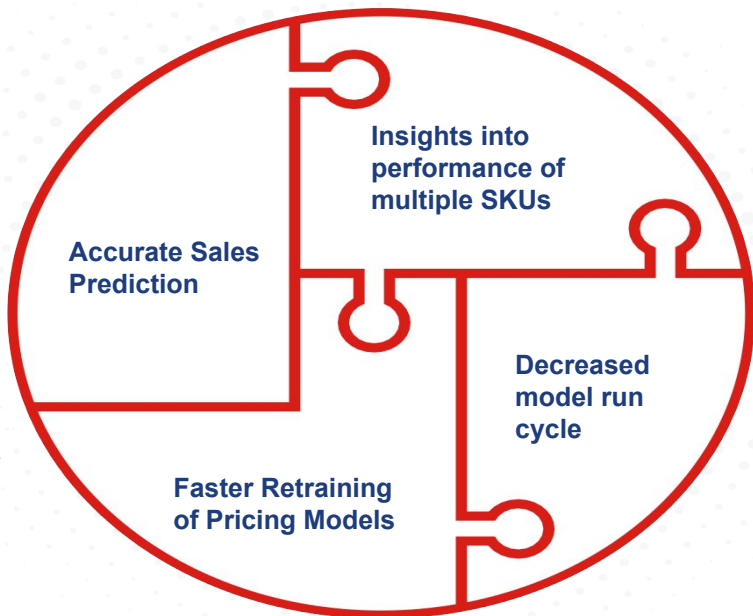
Improved customer satisfaction and loyalt with real-time price moves

Better product innovation and in-store positioning

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How does Sigmoid solve the challenges through Pricing Analytics

Sigmoid's data engineering, data science, and analytics services enable customers to build and scale pricing models across geographies accounting for multiple product SKUs. We take care of the model training to maximize its efficiency and ability to deliver high quality results for pricing products in a way that can increase sales and revenue.

Insights into performance of multiple SKUs

Accurate Sales Prediction

Decreased model run cycle

Faster Retraining of Pricing Models

Sigmoid's Suite of Solutions

Price Elasticity Analysis

Markdown Optimization

Promotion Efficiency Analysis

Channel Efficiency Analysis

Competition Price Sensitivity

Price Optimization

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Driving Sales through Price Elasticity backed recommendations

Client: Leading CPG Giant **Industry : CPG**

Business Problem Statement

Profit lost due to inaccurate pricing leads to either lost volume in overpricing cases or lost revenue due to under pricing cases.

Analytics Solution

Data science-backed approach of developing a model to identify price, distribution & weight elasticities of the end consumer and strategize optimum values to maximize revenue

- A variety of. Data sources like POS Input, promotion & external data sources are used to identify variations in demand & create a model to reflect the same.

- A LOESS model was developed to identify trends, whereas a HLM regression model was built to consider impact of both fixed & random effects.

- This model was used to simulate use cases involving profit/ revenue maximization scenarios at optimum prices & distributions.

Expected Business Value

Strategies strictly based on elasticities of price, distribution & weight helped achieve

- **4 %** *average uptick in Retails Sales across the Portfolio.*

- **2 %** *improvement Gross in margins for the Portfolio.*

Enhancing Elasticity models by Predicting SKU Demand transference

Client: Leading CPG Giant **Industry : CPG**

Business Problem Statement

Absence of a structure to estimate sku level impact of pricing changes on other sku units.

Eg: Change in sales for 30 ml shampoo of brand X because of change in price of 500 ml shampoo of Brand X.

Analytics Solution

Data science-backed approach of developing a model to identify demand changes in a set of SKUs as a response to pricing changes in other SKUs.

- Purchase Structures are developed in conjunction with prevailing Business Logic.

- Consumer Panel & POS Input are used to develop switching indexes that represent transfer of demand in cases of non availability

- The above information is elasticities from Econometrics models to understand impact of pricing actions on volume & profit.

The above logic aids in creation of a simulation playground to assess impact of price changes on the entire portfolio.

Expected Business Value

Strategies based on price elasticity & within portfolio correlation helped achieve

- **7 %** *average uptick in Retails Sales. across the Portfolio.*

- **5 %** *uptick in Portfolio Profitability*

Engagement Models

Sigmoid's Engagement Models

Project Based	Staff Augmentation	Hybrid-Flexi Model/Data Labs/CoE

- Starts with consulting/scoping (2-3 weeks)
- Delivery Program Management
- Interim review
- Success criteria met and IP handover
- Option to continue with product support
- Fixed bid contract
- 3-5 months duration given complexity of problem

- Understanding of skill requirements
- Profile match and rate card
- Onboarding and monthly billing
- Focused training based on client tech stack
- Project Management support
- 10% backup resources unbilled and trained

- Mix of project and staff augmentation engagements
- Requirement gathering
- Requirement classification - as project or staff augmentation
- Joint delivery plan
- Secure resources internally from Sigmoid and bill monthly
- Dedicated PM, Engineering Managers
- Dedicated Management Consultant(s)
- Dedicated Team Leads and Product Owners

Benefits

- Cost effective
- KPI/SLA/Outcome driven
- Suitable for Fixed scope of work
- Less overheads

Benefits

- Scalability
- Flexibility in resourcing
- Ability to change/redefine scope

Benefits

- Cost effectiveness by focus on output
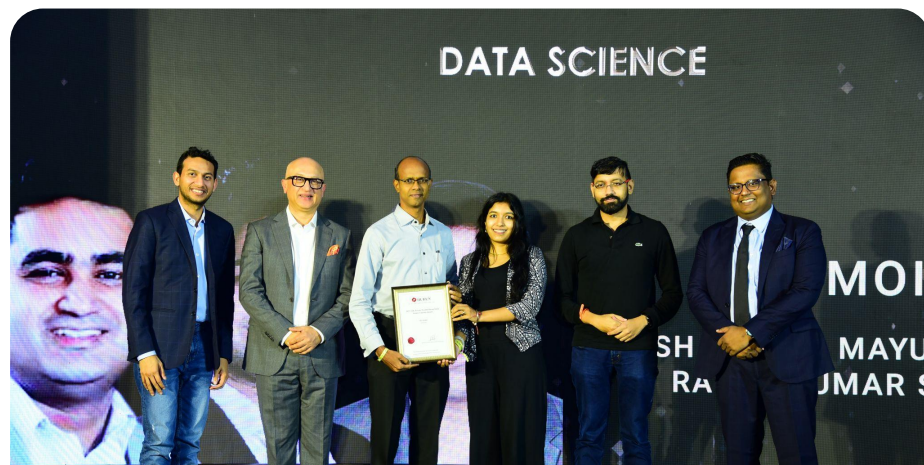- Ability to change/redefine scope/Change requests
- Risk/Reward linked to KPI/SLA

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Thank you

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'India Future Unicorn Award'
in Data Science category by Hurun India

Global presence:
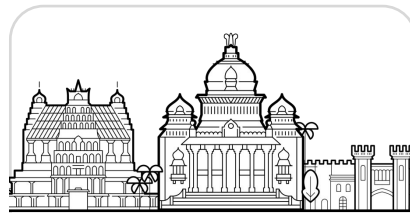

USA (NY, SF, Dallas, Chicago)

EU (Amsterdam, London)

India (Bengaluru)

LATAM (Lima)