



Promotion Analytics on AWS

www.sigmoid.com





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



America's
Fastest-Growing
Private Companies



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

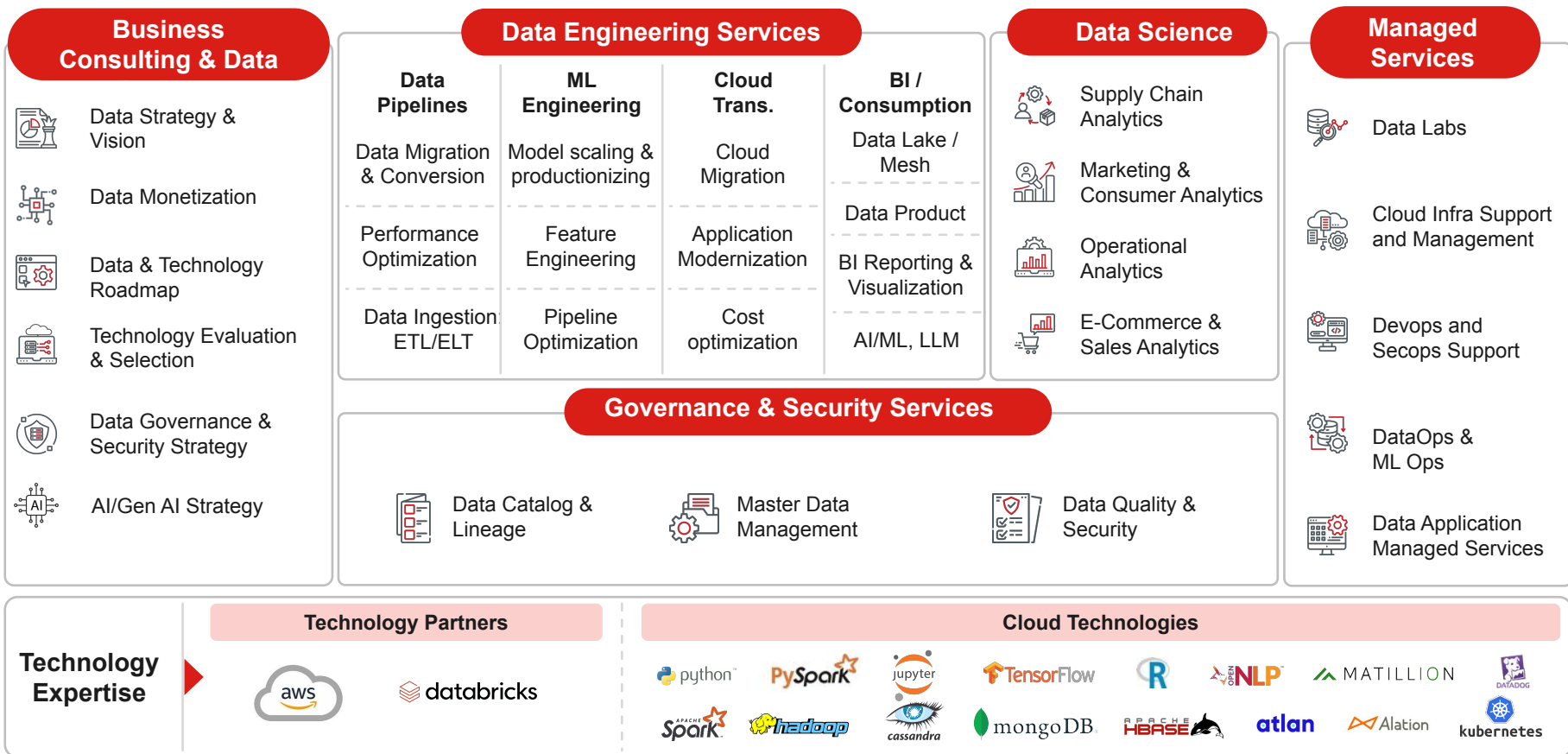


London



Sao Paulo

Enabling Business Transformation with Full-Service Capability Suite



Sigmoid Capabilities - Experience in implementing data solutions in AWS

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

Data Processing & Transformation:

- **Amazon EMR:** Collaborative Apache Spark-based analytics platform used for big data processing and machine learning.
- **AWS Glue:** Fully managed ETL (Extract, Transform, Load) service for preparing and transforming data.

Data Analytics & Visualization:

- **Amazon Redshift:** Data warehouse service used for analyzing large datasets with either serverless or provisioned resources.
- **Amazon QuickSight:** Business intelligence tool for creating interactive visualizations and reports.

Data Storage & Management:

- **Amazon S3:** Scalable and secure data lake for storing large amounts of structured and unstructured data.
- **Amazon RDS:** Managed relational database service for structured data storage.

Data Ingestion & Integration:

- **AWS Data Pipeline:** Creating data workflows that move and process data across AWS services.
- **Amazon Kinesis:** Real-time data ingestion from applications, devices, or any streaming data sources.



Machine Learning & AI:

- **Amazon SageMaker:** End-to-end platform for building, training, and deploying machine learning models.
- **AWS AI Services:** Pre-built AI services for vision, speech, language, and decision-making (e.g., Amazon Rekognition, Polly, Comprehend, Textract).

Security & Compliance:

- **AWS IAM (Identity & Access Management):** Identity and access management service.
- **AWS Organizations & AWS Config:** Governance and compliance tools for managing AWS environments at scale.

Sigmoid's implementation of solutions in AWS involves leveraging a combination of services and tools tailored to specific business needs. Sigmoid would facilitate collaboration between data engineers, data scientists, business analysts, and other stakeholders to align the implementation with business goals and ensure success.



Promotion Analytics Capability Suite

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

Profiling patterns of high performance by Promotion Pattern Identification

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



Business Problem Statement

Absence of a mechanism to predict the performance of promotions .



Analytics Solution

Promotion Pattern Identification [PPI] uses historical promotion data to identify patterns of high-performance.

- Historical promotion, P&L info, Nielsen & external data for holidays were used to build a database having attributes, cause & effect info.
- Attributes around promotion intensity, depth, offer mechanics, duration & timings were developed apart from retailer-specific effects, product attributes, etc.
- A recommendation engine was developed using Xgboost to identify complex interactions and quantify promo volume uplift.

The engine provides info on best alternative, expected uplift & effectiveness category to users in a simulation environment



Expected Business Value

- **10 %** uptick in promo spend effectiveness.
- **20 %** uptick in Sales lift over traditional promotions

Driving marketing effectiveness through **Personalized promotion**

Client: Leading Quick Service Restaurant **Industry :** Quick Service Restaurant



Business Problem Statement

Subpar Customer Lifetime Value
partially & inadequate Customer
Engagement



Analytics Solution

Build personalized marketing ecosystem to have better customer engagement

Clustering

- *Based on purchasing behaviour created 8 diverse segments, to enable launch of machine learning based offers testing ecosystem.*

Sampling

- *Based on purchasing behaviour created 8 segments split segments into Bandit test audience vs EDLP audience vs NAT audience vs test control (stratified sampling).*

Offer matching

- *Built & ran multi armed bandit to produce proportions within MAB test audience, to find affinities of different offers to different customers.*

Pipeline Development

- *Deployed the MAB model and built data pipeline to upload 20 M customer/offers associations to CRM*



Expected Business Value

- **2 %** uplift in average conversion rate
- **2-7%** (peak 9%) uplift in Sales
- *Optimized offers for 9 customer segments, sending **13 MN** emails everyday i.e. equivalent of running more than **13K** A/B tests per week.*

Engagement Models



Sigmoid's Engagement Models

Project Based



- 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

Benefits

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

Staff Augmentation



- 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

Benefits

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

Hybrid-Flexi Model/Data Labs/CoE



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

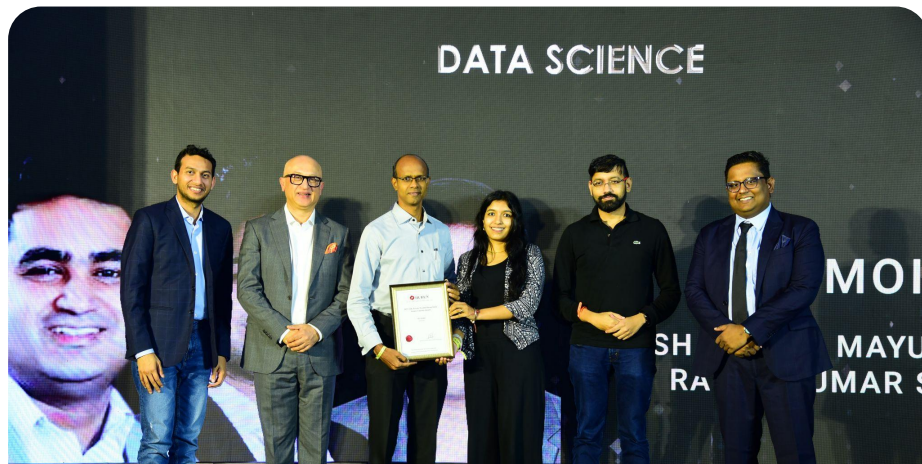
Thank you



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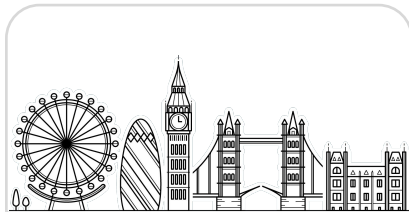


'India Future Unicorn Award'
in Data Science category by Hurun India

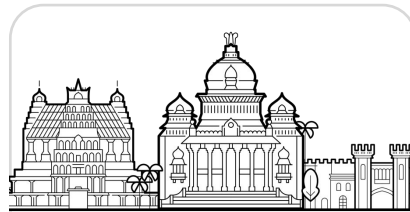
Global presence:



USA (NY, SF, Dallas,
Chicago)



EU (Amsterdam,
London)



India
(Bengaluru)



LATAM (Lima)