Introduction

Who We Are	We are a data engineering service provider with a mission to empower enterprises swiftly transforming their data into actionable outcomes
We provide comprehensive data engineering services from developing scalable data pipelines and designing modern data lakes to enabling real-time analytics and ensuring data quality. Additionally, we prepare your data infrastructure for advanced AI and machine learning applications, ensuring you're future-ready	Our Expertise
Key Customer	Large BPO One of the largest state in India Private Equity Firm Large Consulting Firm

Challenges faced by businesses

Value of data

- Struggling to align data strategies with business goals.2nd business objectives
- Lack of a clear roadmap for data-driven decision-making
- Difficulty in identifying high-impact use cases for data initiatives

Governance/Compliance/ Security

- Risk of non-compliance with evolving regulatory requirements
- Lack of standardized data processes leading to inefficiencies
- Challenges in maintaining data security and privacy

Right Tools / Architecture

- Difficulty scaling infrastructure to handle growing data volumes
- High costs of inefficient or outdated data systems
- Lack of flexibility in infrastructure for integrating new technologies

Is data connected?

- Fragmented data systems creating silos across the organization
- Challenges in achieving seamless integration of legacy and modern systems
- Inconsistent data flow impacting operational efficiency

Can I trust my data?

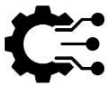
- Decision-making hampered by inaccurate or incomplete data
- Difficulty in standardizing and enriching data from multiple sources
- Limited ability to extract actionable insights from raw data

Biases

- Potential risks of biased AI/ML models impacting outcomes
- Lack of transparency in automated decision-making systems
- Challenges in establishing ethical data practices across the organization

Do we have right team to manage our data ?

Our Data Engineering Offerings

	Capability	Description	Technologies
	**Data Strategy & Consulting**	Data-driven strategy consulting, AI readiness assessments, roadmap development for AI and big data adoption, and data monetization strategies	All inclusive depending on clients, use cases, and usage patterns
	**Data Governance & Compliance**	Data governance frameworks, compliance auditing, data privacy solutions, data lineage, and master data management (MDM)	Native solutions and 3rd parties like Collibra, Waterline, Alation
	**Data Architecture & Infrastructure Management**	Data lake and data warehouse architecture, cloud migration, multi-cloud data strategies, database optimization, and real-time data processing architecture	DWH solutions on prem and cloud, DB solutions / services, Hadoop ecosystem, Azure Data Lake, Snowflake, Grafana, Prometheus
	**Data Integration & Interoperability**	API integration, data pipeline development, ETL/ELT services, data harmonization, and real-time data syncing across platforms.	Kafka, Spark Streaming, Flume, Informatica, Talend, SQL, etc.
	**Data Quality & Data Enrichment**	Data quality audits, automated data cleaning solutions, data enrichment using external sources, and continuous monitoring for data accuracy	Talend data quality, Microsoft Azure Data Quality Services, Informatica, Apache Griffin etc.
	**Data Ethics and Bias Auditing**	Bias detection in AI models, ethical AI consulting, fairness assessments, algorithm transparency audits, and responsible AI governance frameworks.	Fairness Toolkit, Pandas Profiling etc.

Value Proposition : *Accelerate the data supply chain with advanced tools and next-gen technologies*

Collecting Source Data

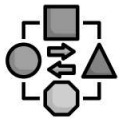
Automate data extraction with AI from APIs, IoT, and web sources

Use AI to detect errors and improve data quality during collection.

Leverage NLP to process text-heavy data sources like emails.

Predict data needs and automate collection with AI.

Processing Data



AI automates data transformation with pattern recognition.

Real-time data processing for faster decision-making.

AI cleanses data, ensuring consistency and reducing duplicates.

AI optimizes workflows in ETL pipelines for efficiency

Storing data

AI manages storage resources dynamically to reduce costs.

Compress data efficiently with AI-based compression models

AI automates data tiering based on access frequency

Predict and prevent storage failures with AI.

Making data available to users securely

Use AI-powered search for better data retrieval with natural language.

AI recommends relevant datasets based on user behavior.

Automate tagging and classification of data with GenAI

AI improves security and access management through behavior analysis.

Our data engineering services integrate cutting-edge Generative AI and AI/ML technologies to transform raw data into strategic assets. By harnessing these advancements, we empower businesses to innovate faster, achieve greater operational efficiency, and stay ahead in an AI-driven world.

Our Key Experiences & Success Stories

Supply Chain - Executive Dashboard design & Implementation for one of the largest consumer good company using Databricks and PowerBI

Built data warehouse for the largest private equity firm in the word using the Microsoft technology.

As part of business transformation, Managed delivery of data track in one of the largest business transformation strategy projects for worlds largest BPO

As-Is, To-Be data strategy

Established data driven lean MVP lab for education technology company which provides inclusive, equitable and transformative education around the world

Created a predictive analytics product for one of the largest wind turbine manufacturers in the world.

Architected an audit transformation tool leveraging analytics and RPA on Microsoft's data lake platform, enabling auditors to detect anomalies efficiently. This tool has saved approximately 10,000 hours in audit execution, significantly boosting service efficiency

Established an enterprise IoT Data platform for world's leading providers of innovative and highly efficient transport solutions to monitor, measure, and manage products, enhancing user safety, asset visibility, and remote diagnostics.

Created data strategy for one of the largest states in India to inform policy decisions, improve public service delivery, monitor development programs, and ultimately enhance citizen welfare, while adhering to data privacy and security regulations

Built data platform for a new generation provider of high-performance solutions to monitor, measure and manage business performance in real-time, primarily focused on Healthcare Payers and Providers, and select industry verticals

Data Strategy & Consulting **Data Governance & Compliance** **Data Architecture & Infrastructure Management**
Data Integration & Interoperability **Data Quality & Data Enrichment**

Why Choose Us as Your Data Engineering Partner

Proven experience in designing, building, and optimizing scalable, secure, and efficient data pipelines, architectures, and systems

Deep Domain Expertise

AI/Gen AI Innovation

Use of Generative AI and AI / ML accelerators to drive automation, enhance analytics, and unlock actionable insights

We employ Agile principles to deliver data engineering projects, ensuring Iterative Development, Continuous Integration, Continuous Delivery, Collaboration & Adaptability

Agile Methodology

Success Enablers

Our team of seasoned data engineers, architects, and scientists collaborate seamlessly to deliver high-quality, scalable, and maintainable data solutions

We stay up-to-date with expertise in the latest data engineering frameworks, libraries, and tools, ensuring seamless integration and optimal performance

Tools and Technologies

Data Infrastructure

Our team is well-versed in designing, deploying, and managing scalable, secure, and efficient cloud-native data infrastructure, ensuring maximum ROI and minimizing costs

Engagement Model

Fixed Fee (FF)

- A fixed price is agreed upon for a specific project scope
- Suitable for well-defined projects with clear requirements

Time & Material (T&M)

- Pays for actual hours worked, plus materials and expenses
- Suitable for projects with uncertain or changing requirements

Dedicated Team (DT)

- A team of dedicated resources (e.g., developers, designers) work exclusively on the client's project.
- Suitable for long-term projects or ongoing support and maintenance

Data Engineering Labs

- Long term strategic relationship
- Commitment to reduce operational cost over the period of time
- Dedicated HR
- Runs like your dedicated team with separate network, security & HR
- Hybrid engagement model (combination of FF,T&M and DT)

Call to Action

Let’s unlock the power of your data together. Reach out to us today to explore how our data engineering solutions can elevate your business. We look forward to partnering with you on this transformative journey. Thank you

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Case Study: Executive Dashboard for Large Consumer Goods Company in NA

Problem Statement

- Executive team in customer operations lacked a centralized, real-time view of key performance indicators (KPIs) across Customer, Service, Demand Planning, Inventory, Logistics, Production, Collect & overheads.

Solution

- Current state assessment
  - Key Performance Indicators monitored across business functions
  - Understanding existing dashboarding capabilities
  - Understanding current data lake structure and data sources
- To-Be Solution Definition
  - Centralize KPI dictionary creation
  - Data acquisition strategy
  - Data pipeline creation
  - Automation
- Dashboards design and implementation

Impact

- Empowered executives with a single source of truth, enabling strategic oversight of customer experience and operational performance.
- Improved SLA compliance

Tools and Technologies

- Databricks, PowerBI

Case Study: Digital Transformation Strategy for leading A&D Manufacturer

Problem Statement

- OEM rating declining due to poor delivery and quality – loss of business
- 65% is the cost of raw material and looking to optimize the overall supply chain using digital technologies
- Issues of High & low inventories, production downtime due to unavailability of Raw materials in-time
- Minimal use of digital technologies leading to wastage of time, error-prone outputs

Solution

- Created Digital Transformation Strategy by analyzing 9 key functions and 450+ processes
- A detailed digital transformation roadmap created with 16 digital initiatives

Impact

- The Digital ecosystem post implementation of these 16 initiatives would help
- Generate INR 58 Cr. of additional revenues
- Cost savings of INR 26 Cr.
- Overall 246% ROI
- Higher CSAT due to better delivery & quality, repeat business, complete real-time traceability, increased production efficiency, reduced costs & reduced or zero defects

Tools and Technologies

- Digital Maturity Assessment Framework

Case Study: Data lab for large PE Firm

Problem Statement

- The organization faced significant challenges with data fragmentation, quality inconsistencies, and reporting delays due to disparate legacy systems and a lack of centralized data management.
- Siloed data across departments led to redundant, outdated information, hampering accurate business analysis and compliance

Solution

- Implemented multiple systems like Enterprise Data Warehouse, Master Data Management, Hedge Fund Accounting Waterfall System and a CRM system from scratch.
- Helped in improving the data quality and standardizing the data across the organization by implementing a fully functional MDM system.
- Implemented (from end to end) a very reliable data warehouse which has high availability, performance and supportability.
- Migrated the reporting portal from Cognos to SSRS. Proposed scaled out deployment strategy which eventually reduce the company's cost and reporting performance.

Impact

- The implementation of centralized data systems greatly enhanced data reliability, quality, and accessibility, allowing for faster and more accurate reporting and analytics.
- This data infrastructure modernization improved decision-making and operational efficiency while reducing infrastructure costs. Furthermore, the scalable and high-availability architecture laid the foundation for sustainable growth, ensuring that systems can handle future demands and regulatory compliance with minimal disruption.
- Network Analysis for complex scenarios like circular trades, reverse linear trades etc.

Tools and Technologies

- Microsoft SQL Server 2005 / 2008 / 2012 , ETL: SQL Server integration Services (SSIS) & Active Batch, Analytics: SQL Server Reporting Services, IBM Cognos 8, MS Excel and R, OLAP: SQL Server Analysis Services, Essbase, MDM: IBM Initiate, SQL Server Master Data

Case Study: Internal Audit Analytics tool

Problem Statement

- Resistance to run any external query in Client's own production environment – **Reliability**
- Various ERPs with multiple release or version results in numerous scripting effort. – **Process Management & Governance**
- Running queries in ERP at times facing extraction failure due to complex transformation **– Strategy Optimization**
- Data extraction will not work if the data size is big **– Size of dataset**
- The approach does not use the in-built features/Tools of ERPs to extract data – **Native ERP Capability**

Solution

- Implemented simple date ingestion framework which can be used by auditors
- Rule engine to define all the rules for each of the processes . Comprehensive set of rules library and provision to add custom rules
- Define the applicability of rules for a particular audit
- Scheduler to execution of rules for each audit
- AI/ML based anomalies detection
- Dashboards to showcase the rule execution status and anomalies
- Containerized and Cloud agnostic solution

Impact

- Enhanced efficiency, better results, significant cost savings
- Saved approximately **20,000** hours in the first year in internal audit execution
- Shift-left philosophy empowering non-technical auditors

Tools and Technologies

- Kylo, Spark, Azure, Superset, Hive, Hadoop

Case Study: Data Ingestion Framework for Largest manufacturer of Wind Turbine

Best in class Analytics Platform for wind energy industry

Problem Statement

- Data model for each turbine depends on the make and the model of the turbine
- There is no standard mechanism to import data into Analytics database. The data from each customers comes in different formats and frequencies.
- It's a time consuming activity due to lack of standardization and automation

Solution

- Build a custom data ingestion platform which can ingest data from any model of wind turbine
- Intuitive user interface for ease of use

Impact

- Improved customer onboarding by 50%
- Improvement of data quality
- Improved accuracy of prediction

Tools and Technologies

- Java JSP, node.js, react.js, Talend, MySQL

Case Study: Data Strategy for One of the Largest State in India

Problem Statement

- The objective of this consultancy was to assist the state government in developing a data strategy for state and district planning, policymaking, and scheme implementation.
- The strategy should be informed by a thorough assessment of the state data ecosystem including governance architecture, policy environment, organizational capabilities, technology applications and information management. Special attention should be given to the state statistical system and fitness-for-purpose of the main statistical products and services.

Solution

- Conduct User consultations
- Data Governance within the state government.
- Study and map data being generated by online financials (DBT schemes).
- Review Organizational capabilities of key data producing agencies.
- Assess the capabilities of data users.
- Conduct a data inventory and data use mapping exercise for district growth strategies.
- Study of DES (Directorate of Economics and Statistics)
- Study of Remote Sensing Application Centre
- Establish current baseline and provide national and international best practices
- Identify the challenges faced by the state government for efficient and effective data-driven governance and recommend a roadmap for a data strategy.

Impact

- Identified the challenges faced by the state government for efficient and effective data-driven governance and recommend a roadmap for a data strategy.
- Explore opportunities for Integration of DES and Remote Sensing Application Centre.

Tools and Technologies

- MS Office

Case Study: Data Governance & MDM Strategy for one of the Largest BPO

Problem Statement

- **Challenges related to data accuracy, consistency, and compliance across multiple systems.**
- **Data silos, leading to duplicate, conflicting, or outdated information that can hinder decision-making and erode trust in data insights.**
- **Disparate data sources also complicate regulatory compliance and increase the risk of errors, fines, and operational inefficiencies**
- **Setting up infrastructure for single source of truth**

Solution

- Defining vision across Data Track
- Current state assessment
  - Key Performance Indicators monitored across business functions
  - Understanding existing BI Capabilities
  - Understanding Current State Challenges
- To-Be Solution Definition
  - Defined High level Candidate Solution Options
  - Recommendation of future BI capabilities across functions
- Defined an iterative Roadmap, taking into account business value, business priorities and ease of implementation

Impact

- Identified Key Data Elements
- Defined data governance structure
- Defined processes related to data governance
- Defined data lake architecture
- Defined BI Architecture
- Standardize KPI definitions across business functions

Tools and Technologies

- MS Office