Jio Brain Platform

Jio Brain - An Industry Agnostic AI Platform
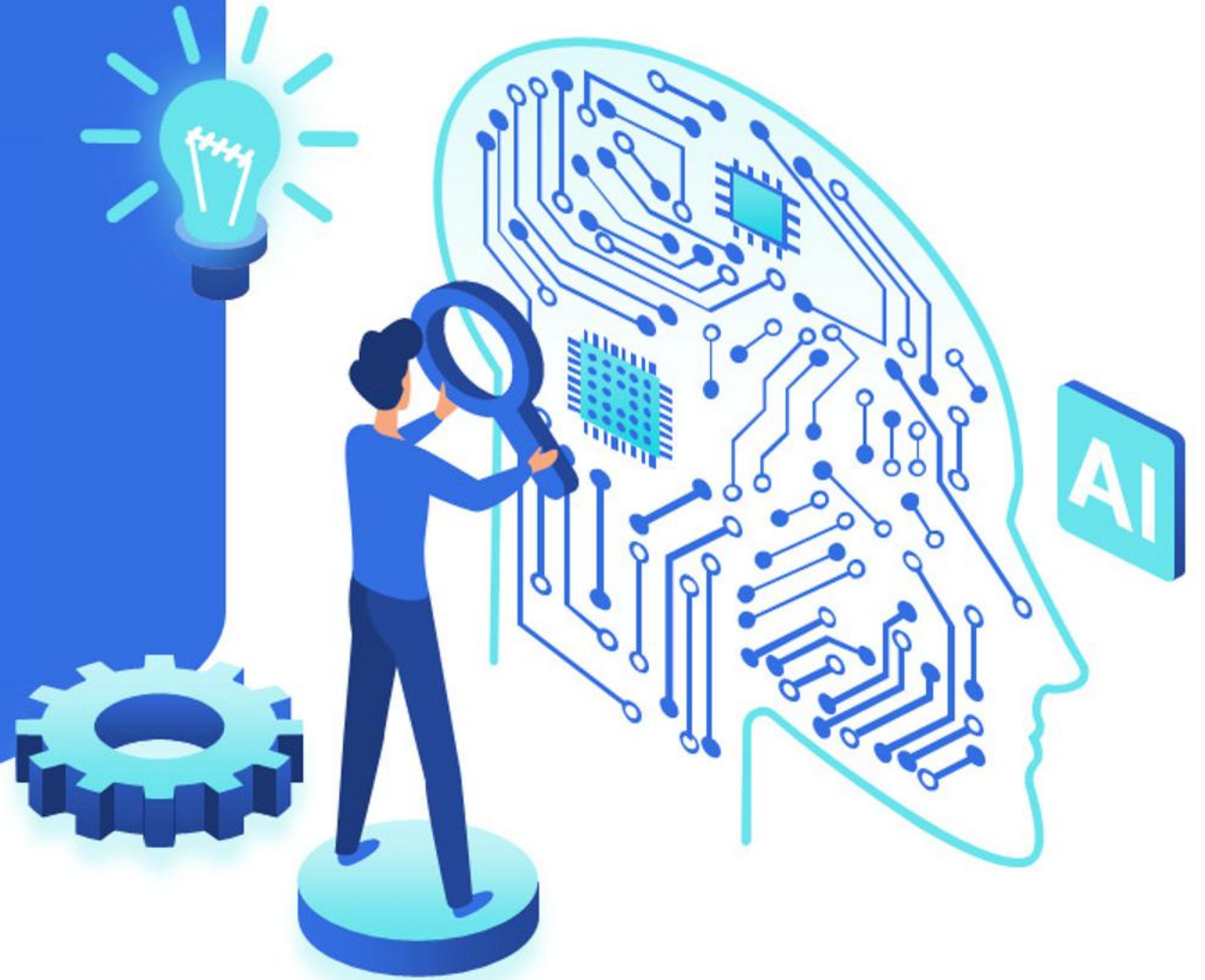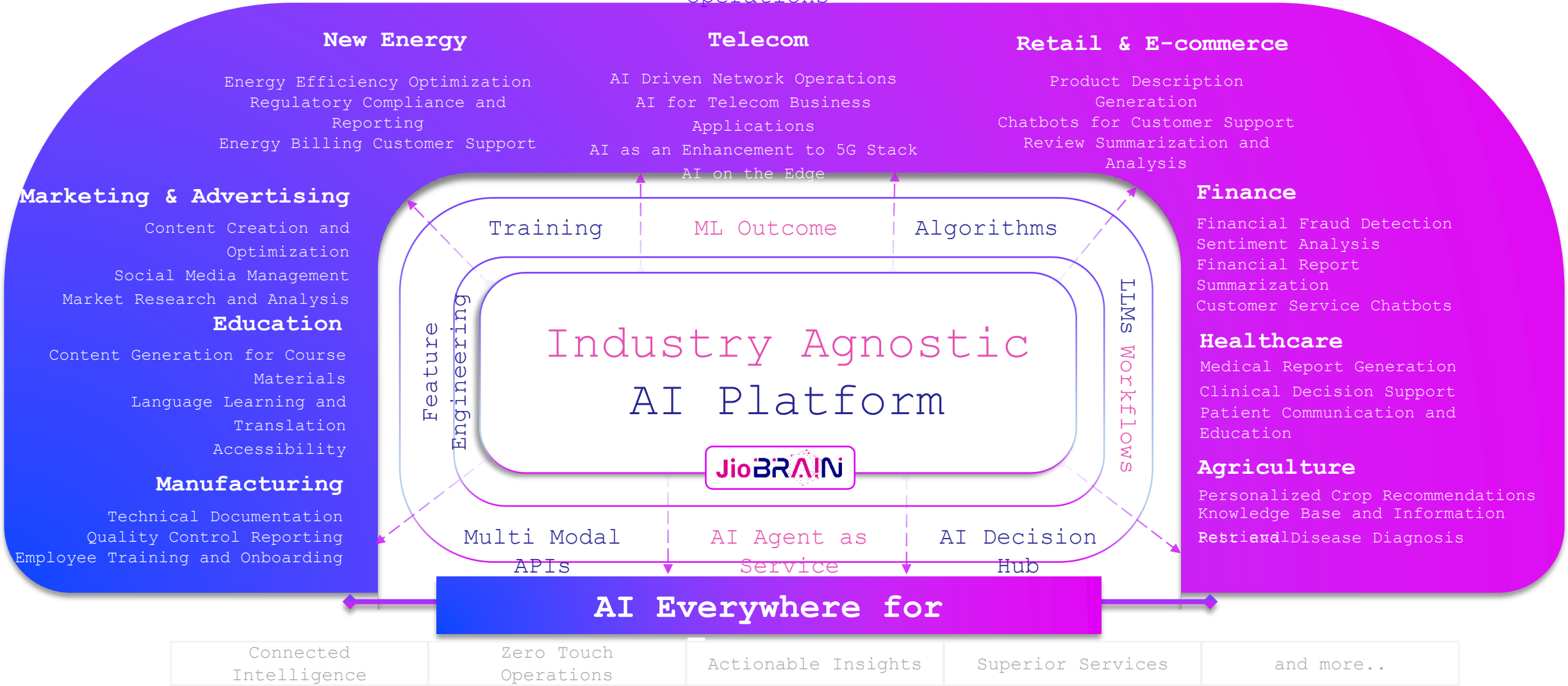
Jio Brain enables the service provider and enterprises to turbo charge their business and service operations

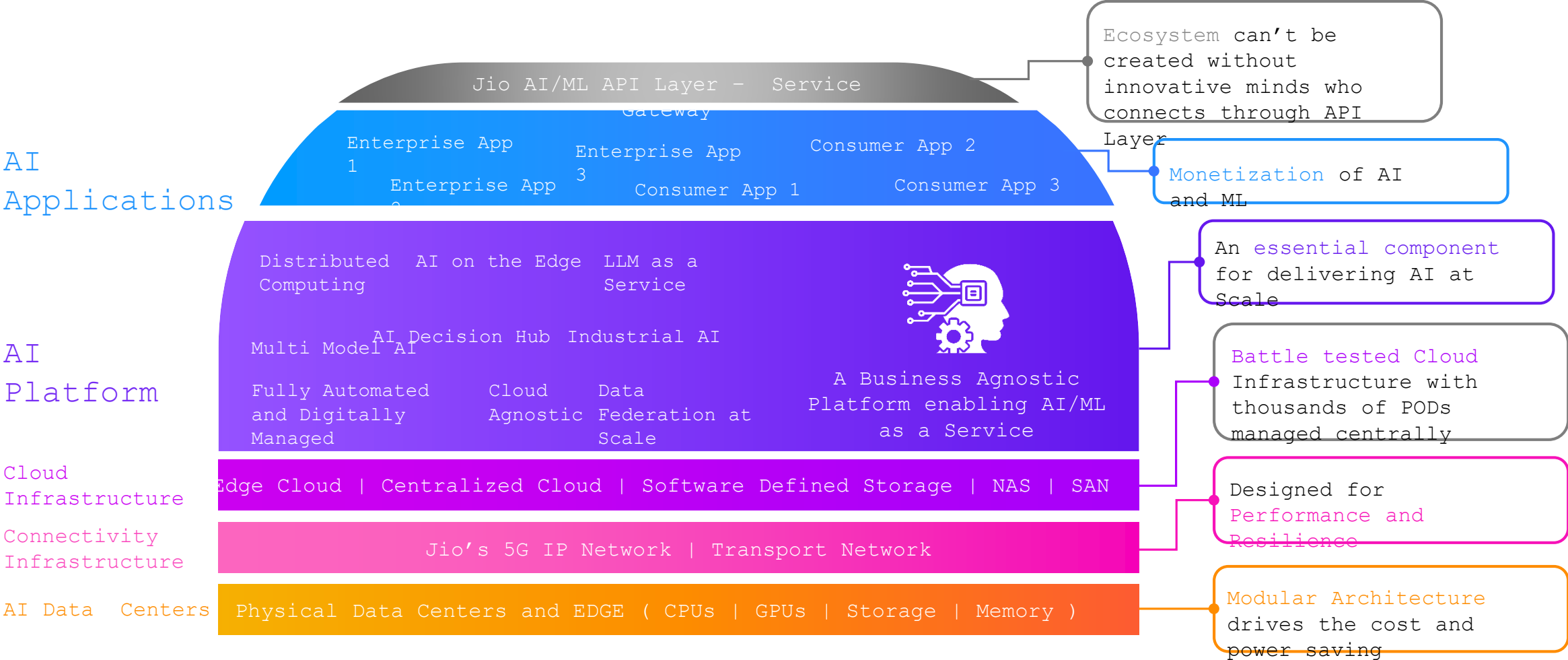## New Energy

Energy Efficiency Optimization
Regulatory Compliance and Reporting
Energy Billing Customer Support

Telecom

AI Driven Network Operations
AI for Telecom Business Applications
AI as an Enhancement to 5G Stack
AI on the Edge

Retail & E-commerce

Product Description Generation
Chatbots for Customer Support
Review Summarization and Analysis

Marketing & Advertising

Content Creation and Optimization
Social Media Management
Market Research and Analysis

Education

Content Generation for Course Materials
Language Learning and Translation
Accessibility

Manufacturing

Technical Documentation
Quality Control Reporting
Employee Training and Onboarding

Finance

Financial Fraud Detection
Sentiment Analysis
Financial Report Summarization
Customer Service Chatbots

Healthcare

Medical Report Generation
Clinical Decision Support
Patient Communication and Education

Agriculture

Personalized Crop Recommendations
Knowledge Base and Information Retrieval
Pest and Disease Diagnosis

Feature Engineering	Training	ML Outcome	Algorithms	LLMs Workflows

Industry Agnostic AI Platform

JioBRAIN

Multi Modal APIs	AI Agent as Service	AI Decision Hub

AI Everywhere for

Connected Intelligence	Zero Touch Operations	Actionable Insights	Superior Services	and more..

Tangible benefits to customers, services and business operations.

Jio Brain: Top Features Listing

1. Jio Brain Foundational Model Training & Fine Tuning as a Service

2. Jio Brain's AI Decision Hub

3. Real-time data aggregation using the Jio Brain Data Federation Platform

4. Distributed Machine Learning with ML on the Edge

5. Jio Brain RTAS (Real Time AI Service)

6. Jio Brain Distributed Machine Learning Platform

7. Jio Brain Real-Time LLM

8. Ability to Connect 3rd Party LLMs

9. Multi-lingual capabilities

10. Jio Brain API Service Gateway

11. Jio Brain Metering of API for Monetization

12. Jio Brain Speech AI

13. Jio Brain Summarization Model

14. Jio Brain Industrial AI Algorithms

15. Jio Brain Model Chaining / Pipelining

16. Jio Brain Data Connectors for Federation

17. Jio Brain Image AI Platform

18. Jio Brain Video AI

19. Jio Brain Auto Hyper Parameter Tuning

20. Selective ML model processing

21. Best Fit Model for Given Input Set and Auto Retraining of Models

22. Bring Your Own Model

23. Data Visualization of Input data for Feature Engineering

24. Closed loop action in conjunction with Jio AI Decision Hub

25. Support for Deep Learning Algorithms and Neutral Networks

26. Jio Brain Avtaar Creation

27. Jio Brain Prompt based Image Generation

28. Jio Brain Colouriser / Decolouriser

29. Jio Brain Background Removal

30. JioBrain Training GPUs as a Service as part of JIoBrain AI as a Service
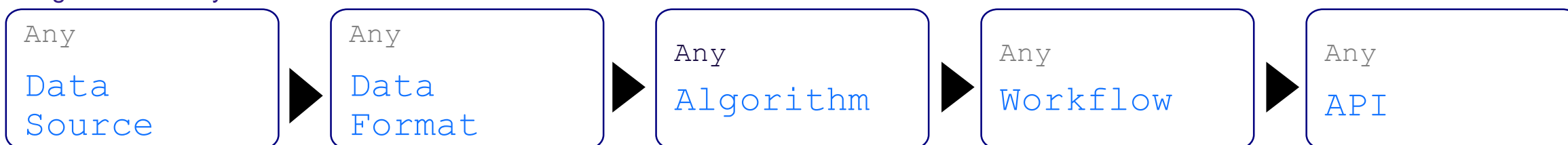
Jio Brain: Key Differentiators

Industry and business-agnostic

Cloud-native with edge support from Day 0

Dedicated API layer to extend AI/ML capabilities to all applications

Enterprise and mobile-ready LLM as a Service

AI Decision Hub to configure rules and policies on ML outcomes

Integrated with Jio's network automation platforms

Agnostic of the GPU provider

Real-time data aggregation using the JioBrain Data Federation Platform

Plug-and-play architecture

Highly scalable and reliable with full HA and geo-redundancy

Real-time AI service for edge-based auto-retraining

Ability to connect with third-party LLMs

JioBrain is an industry-agnostic distributed machine learning platform that lets any operator or enterprise institutionalize ML in day-to-day operations

Jio Brain Architecture for Cloud and EDGE

Jio PLATFORMS

JioBrain is a distributed machine learning platform that can train and apply ML models for any business vertical.

Jio AI/ML API Layer – Service Gateway

AI Applications

Enterprise App 1
Enterprise App 3
Enterprise App 2
Consumer App 2
Consumer App 1
Consumer App 3

Ecosystem can't be created without innovative minds who connects through API Layer

Monetization of AI and ML

AI Platform

Distributed Computing
AI on the Edge
LLM as a Service

Multi Model AI
AI Decision Hub
Industrial AI

Fully Automated and Digitally Managed
Cloud Agnostic
Data Federation at Scale

A Business Agnostic Platform enabling AI/ML as a Service

An essential component for delivering AI at Scale

Battle tested Cloud Infrastructure with thousands of PODs managed centrally

Cloud Infrastructure

Edge Cloud | Centralized Cloud | Software Defined Storage | NAS | SAN

Designed for Performance and Resilience

Connectivity Infrastructure

Jio's 5G IP Network | Transport Network

AI Data Centers

Physical Data Centers and EDGE (CPUs | GPUs | Storage | Memory)

Modular Architecture drives the cost and power saving

JioBrain Platform Services

- Training `as a Service`

- Feature Engineering `as a Service`

- Hyperparameter Tuning `as a Service`

- ML Chaining `as a Service`

- LLM `As a Service`

- Algorithms `as a Service`

- Coding `as a Service`

- Code Quality `As a Service`

- Workflows & SI `as a Service`

- Image Recognition `as a Service`

- Video Recognition `as a Service`

- Video Generation Gaussian Splatting `as a Service`

- Image Generation `as a Service`

- **Bring Your Own Model** `as a Service`

Integrates with Any

| Any Data Source | ▶ | Any Data Format | ▶ | Any Algorithm | ▶ | Any Workflow | ▶ | Any API |

No Coding Required

Support for a variety of algorithms

JioBrain supports **100+** out-of-the-box algorithms spanning across clustering, regression, and forecasting. This wide range of ready-to-use models provides users with diverse options to choose from based on their specific needs and data requirements.

100+ Out-of-the-Box Algorithms

1. Linear regression
2. Logistic regression
3. GBT
4. Isotonic
5. Random forest
6. Decision tree
7. tbats
8. Sarima
9. Arima
10. Prophet
11. Holtwinters
12. Autoregression
13. NeuralProphet
14. Exponential Smoothing (ES)
15. Vector autoregressive (VAR) model
16. Vector error correction (VECM) model
17. Generalized Linear Models (GLM)
18. Radial Basis Function Networks (RBFN)
19. Learning Vector Quantization (LVQ)
20. Self-Organizing Map (SOM)
21. CatBoost
22. LightGBM
23. Gradient Boosting Machines (GBM)
24. Partial Least Squares Regression
25. Multivariate Adaptive Regression Splines (MARS)
26. Long Short-Term Memory Networks (LSTM)
27. Gated Recurrent Units (GRU)
28. Negative Binomial Model
29. Exponential Smoothing
30. Singular Spectrum Analysis (SSA)
31. OneclassSVM
32. XGBoost
33. Histogram-based outlier score
34. Local Outlier Factor (LOF)
35. Autoencoders
36. K-nearest neighbor: k-NN
37. Support Vector Machine (SVM)
38. Connectivity-based Outlier Factor (COF)
39. Naïve Bayes Classifier Algorithm
40. Isolation Forest
41. Robust Covariance
42. Kernel PCA
43. Principal Component Analysis (PCA)
44. Gaussian Mixture Models (GMM)
45. Hidden Markov Models (HMM)
46. Long Short-Term Memory (LSTM)
47. Generative Adversarial Networks (GAN)
48. Variational Autoencoders (VAE)
49. k-Means
50. Hierarchical Clustering
51. DBSCAN
52. OPTICS Algorithm
53. Mean-Shift Clustering
54. Subspace Outlier Detection (SOD)
55. Anomaly Detection Using Binomial Test
56. Smith-Waterman algorithm
57. Fast Dynamic Time Warping (FastDTW)
58. Singular Value Decomposition (SVD)
59. Non-negative Matrix Factorization (NMF)
60. Independent Component Analysis (ICA)
61. Convolutive ICA
62. Kernel ICA
63. Hierarchical Temporal Memory (HTM)
64. Quantile Regression
65. Slow Feature Analysis (SFA)
66. Jensen-Shannon divergence
67. Hamming Distance
68. Manhattan Distance
69. Euclidean Distance
70. Minkowski Distance
71. Feature Selection-Based Outlier Detection (FSOD)
72. Deviation-Based Outlier Detection (DBOD)
73. Distance-Based Outlier Detection (DBOD)
74. support vector machine
75. naive bayes Gaussian NB
76. k-mean clustering
77. K-Nearest Neighbors (KNN)
78. CART (Classification and Regression Trees)
79. Gradient Boosted Trees LightGBM
80. Multinomial NB(naïve bayes)
81. Linear Discriminant Analysis (LDA)
82. Quadratic Discriminant Analysis (QDA)
83. Neural Networks e.g., Multi-Layer Perceptrons (MLP)
84. AdaBoost
85. Bagging Classifier
86. Extra Trees Classifier
87. Stochastic Gradient Descent (SGD) Classifier
88. Ridge Classifier
89. Kernel Approximation Methods e.g., Radial Basis Function (RBF)
90. Nearest Centroid Classifier
91. One-vs-Rest (OvR) and One-vs-One (OvO)
92. Passive Aggressive Classifier
93. Label Propagation
94. Naive Bayes
95. Neural Networks
96. Policy Gradient Methods
97. Polynomial Regression
98. Transfer Learning
99. Transformer Models (e.g., BERT, GPT, T5)
100. t-Distributed Stochastic Neighbor Embedding (t-SNE)
101. Co-training

Thank You