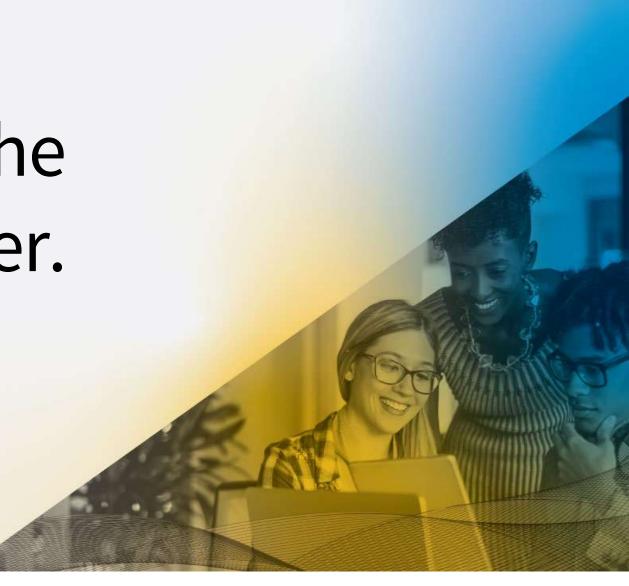**LTIMindtree**

Let's get to the future, faster.
Together.

InterimOptimizer

October 2025

InterimOptimizer: Automation of Interim Analysis Report Generation in Clinical Trials
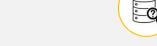
LTIMindtree's InterimOptimizer automates interim analysis in clinical trials by leveraging Gen-AI to address data gaps, bias, and reporting inefficiencies. It enhances decision-making, streamlines report generation, and improves overall trial oversight with intelligent, scalable features.

Benefitted Personas

- Clinical researchers
- Regulatory teams
- Data managers
- Sponsors

Bottlenecks

Analytical Bias

Data Gaps

Integrity Risks

Interim Prevalence

Value Propositions

Accelerated Trial Intelligence

Smarter Clinical Oversight

Optimized Trial Workflow

Insight-Led Efficiency

Technologies optimized

- Azure OpenAI
- RAG Framework
- Python
- Vector database
- HTML
- CSS
- JavaScript

Strategic Interventions

Decoding data relationships:	Understand and analyze the relationships and interdependencies among various data elements to uncover valuable insights.
Synthetic data generation and trend analysis:	Generative AI enabled synthetic data generation and trend analysis for addressing the challenge of inadequate data and missing values in database.
Automated report summary generation:	Gen-AI enabled classification and summarization of demography, efficacy, safety data across different groups (Active/Placebo/ Comparator) and at different timepoints. Generate human-like downloadable text report.
Contextual chatbot for database queries:	Improves data quality and patient safety by enabling timely issue resolution and reducing protocol deviations through intelligent, proactive communication.

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Thank You