NuSuMMit®

ModelGenie: Automating Data Modeling with GenAI Precision

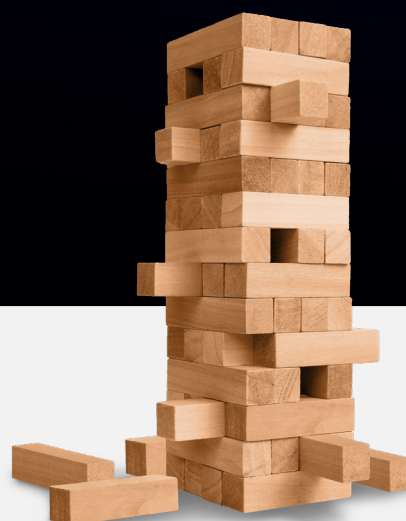Accelerate data modeling from days to minutes with AI-driven automation and rule-based consistency.

Building accurate data models is a critical step in every analytics and modernization journey. Yet, most data modeling processes remain manual, time-intensive, and prone to inconsistency. Analysts spend hours profiling data, reconciling anomalies, and ensuring normalization across multiple datasets.

This slows delivery, increases reliance on specialist expertise, and makes it difficult to maintain governance and repeatability at scale.

Organizations need a faster, more consistent way to translate raw data into reliable models that reduce effort without compromising accuracy or control.

The Data Modeling Challenge

Manual data modeling often struggles to keep pace with the modern demands of data. Each dataset presents its own set of challenges, including inconsistent naming, missing relationships, and unstandardized formats that hinder analysis and necessitate rework.

Key challenges include:

- Manual profiling and schema design across multiple datasets.
- Inconsistent naming conventions and unclear relationships.
- Difficulty ensuring normalization, referential integrity, and reproducibility.
- Limited scalability when handling large or complex files.
- High dependency on individual modeler expertise.

Organizations need an automated, rule-based approach that ensures quality and speed, without compromising control.

Introducing ModelGenie

ModelGenie is a GenAI-powered data modelling solution that simplifies and accelerates the creation of enterprise-grade models. Built on AWS Bedrock and Streamlit, it reads, profiles, and interprets flat files such as CSV or Excel to automatically generate logical models, ER diagrams, SQL DDL scripts, and SCD recommendations.

Designed for speed, transparency, and enterprise reliability, ModelGenie reduces manual data modeling effort while delivering consistent, structured, and audit-ready outputs for engineering and analytics teams.

Key Capabilities:

AI-Driven Modeling
Generates logical models, ERDs, SQL DDL, and SCD recommendations using GenAI.

Automated Profiling
Detects schema, profiling metrics, and anomalies from uploaded files.

Prompt Engineering with Rules
Enforces strict modeling standards for normalization, primary/foreign keys, and referential integrity.

Anomaly Detection and Reconciliation
Automatically identifies and resolves mismatches.

Multi-Format Outputs
Exports results as ER diagrams, SQL scripts, and structured documentation.

Secure and Serverless
Runs in-memory with no persistent data storage. Integrates via AWS IAM and HTTPS endpoints.

Business Benefits

ModelGenie delivers measurable improvements in productivity, consistency, and governance for data engineering and analytics teams.

By automating time-intensive modeling tasks and enforcing rule-based accuracy, ModelGenie enables faster delivery and higher confidence in downstream analytics.

Key Benefits:

Accelerated Modeling Cycles
Reduce modeling effort by up to 90%, turning manual workdays into minutes.

Consistent and Accurate Outputs
Apply standardized modeling rules across all datasets, ensuring uniform quality.

Lower Cost and Manual Effort
Minimize dependency on specialists through automation and reusable templates.

Transparent and Auditable
Generate reproducible, explainable outputs that enhance governance and compliance.

Scalable for Enterprise Use
Handle multiple datasets and large files efficiently through AWS Bedrock integration.

Ready for Integration
Output formats align seamlessly with data warehouses, BI tools, and engineering pipelines.

Why
ModelGenie

ModelGenie transforms how teams approach data modeling, replacing manual, error-prone processes with intelligent automation. Its blend of GenAI precision, governed outputs, and built-in auditability makes it ideal for enterprise use.

Key Differentiators:

1 AI-guided, rule-based data modelling with transparent logic.

2 Seamlessly integrates with existing workflows while maintaining enterprise-grade security and governance.

3 Consistent, repeatable results ready for engineering and analytics use.

4 Designed for enterprise scalability and operational efficiency.

Why NuSummit

NuSummit brings deep experience in **Data, AI, Cloud Modernization, and Cybersecurity,** helping enterprises operationalize GenAI responsibly and effectively.

Our delivery combines proven frameworks, technical expertise, and hands-on implementation experience to ensure tools like ModelGenie deliver measurable business outcomes.

Key Highlights:

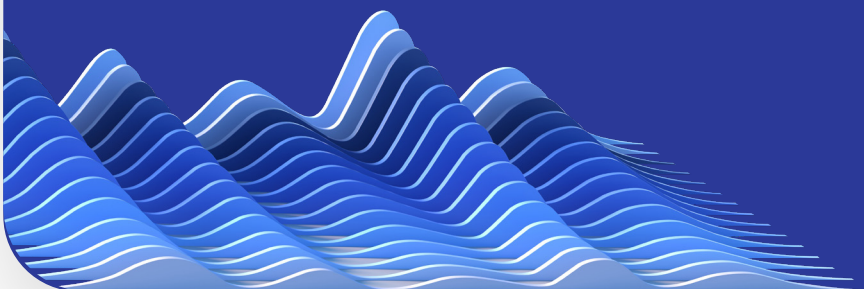|			
Expertise across Snowflake, Databricks, and AWS ecosystems.	Proven track record in AI-driven data modernization.	Focus on secure, scalable, and governed enterprise adoption.	Commitment to measurable outcomes and client success.

ModelGenie eliminates one of the most time-intensive steps in data engineering: model design and standardization. Using AI-driven automation and rule-based design, organizations can build accurate, auditable, and scalable data models in minutes.

With NuSummit's expertise in data modernization and AI integration, organizations can confidently accelerate their analytics journey and scale data initiatives with precision.

About NuSummit

NuSummit is a global technology leader in AI-led digital transformation, specializing in applications, data, analytics, cloud, and cybersecurity. With over 300 clients worldwide, including 22 Fortune 500 companies, NuSummit supports organizations across industries. Our core expertise lies in banking, insurance, and capital markets, where we offer specialized solutions for these sectors.

With over two decades of experience and 3,000+ professionals, we deliver AI-driven, end-to-end solutions that integrate advanced cloud infrastructure and cybersecurity. Certified to top industry standards and backed by a robust partner ecosystem of hyperscalers and niche innovators, NuSummit is a trusted partner for secure, impactful digital innovation.

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