



Synthetic Data Generation

Zensar's Synthetic Data Generation powered by AI and gen AI is a cutting-edge solution designed to address the challenges of data privacy, availability, and cost efficiency. This offering generates realistic synthetic data for various purposes, including developing and testing machine learning models, while ensuring compliance with privacy regulations and maintaining data integrity.



Need for this offering

PolicyBot helps streamline HR operations by automating responses to routine policy inquiries, freeing up HR teams to focus on strategic initiatives. In a landscape where employees require immediate and accurate information, PolicyBot delivers quick answers directly from official documents, fostering a self-service culture that

enhances employee satisfaction and understanding of company policies. Its versatility in processing various formats and its adaptability for future use cases make it essential for improving operational efficiency and setting a new standard for HR service delivery.



Features

- **Data simulation:** Replicates real-data patterns and relationships using mathematical and statistical models
- **Generative Adversarial Networks (GANs):** Creates realistic synthetic data through an iterative training process using neural networks
- **Rule-based generation:** Generates data based on user-defined rules and constraints, leveraging domain knowledge
- **Data coverage:** Ensures optimal representation of testing data, including corner and edge cases, using conditional GANs and boundary conditions



Key differentiators

- Provides comprehensive test datasets covering common scenarios and rare edge cases, enhancing system reliability
- Allows fine-tuning of the base AI model for different fields across multiple geographies, reducing costs and ensuring standardization
- Uses gen AI to create powerful synthetic data, enabling comprehensive testing and diverse model training



Benefits

- Generates high-volume synthetic samples that accurately reflect the original data
- Ensures synthetic data follows the distribution of real-world data and covers corner and edge cases
- Provides a privacy-safe alternative to using real-world data
- Reduces testing time and associated costs by ensuring comprehensive scenario coverage with less data



Use cases

- **Healthcare:** Develops and validates new treatments and diagnostics using synthetic patient data, protecting privacy while enhancing AI training
- **Finance:** Fights fraud, assesses risk, and tests trading algorithms with synthetic data, simulating market scenarios and enabling privacy-safe customer analytics
- **Autonomous vehicles:** Simulates diverse and challenging driving scenarios for faster, cheaper training and validation of self-driving car algorithms
- **Retail/E-commerce:** Simulates customer behavior for better demand forecasting, inventory management, and personalized marketing
- **Entertainment:** Creates new genres of music and unique videos, and enhances the quality of old pictures and movies
- **Cybersecurity:** Trains and tests threat detection systems with synthetic attack data, strengthening defenses and enabling privacy-safe security analytics

zensar
An  RPG Company

At Zensar, we're 'experience-led everything.' We are committed to conceptualizing, designing, engineering, marketing, and managing digital solutions and experiences for over 145 leading enterprises. Using our 3Es of experience, engineering, and engagement, we harness the power of technology, creativity, and insight to deliver impact.

Part of the \$4.8 billion RPG Group, we are headquartered in Pune, India. Our 10,000+ employees work across 30+ locations worldwide, including Milpitas, Seattle, Princeton, Cape Town, London, Zurich, Singapore, and Mexico City.

For more information, please contact: info@zensar.com | www.zensar.com