

AI-Powered Network Packet Analysis for Enhanced Insights

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AI-Powered Network Packet Analysis

Decode. Query. Understand.
Act at 5G scale.

From Raw
PCAPs to
Actionable
Intelligence

Built for VoIP & 5G Core Networks

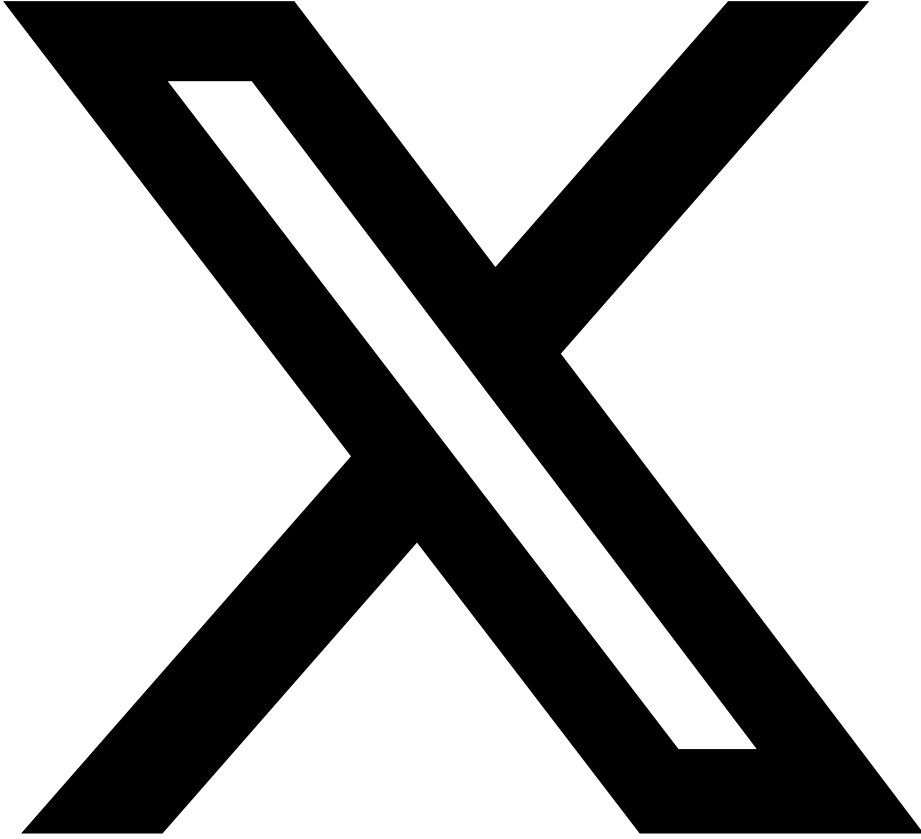
SIP • RTP • GTP • DIAMETER • NGAP • PFCP

Case Study



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AI-Powered Network Packet Analysis for Enhanced Insights

Client

A telecom provider managing VoIP and 5G core traffic sought to modernize packet analysis across their operations and engineering teams.



How AI Transforms Network Traffic

Step 1

Ingest PCAPs

VoIP & 5G core traffic

Step 2

Decode Automatically

SIP • RTP • GTP • DIAMETER

Step 3

Ask Questions

Natural-language queries

Step 4

AI Insights

Anomalies • Patterns • Summaries

Step 5

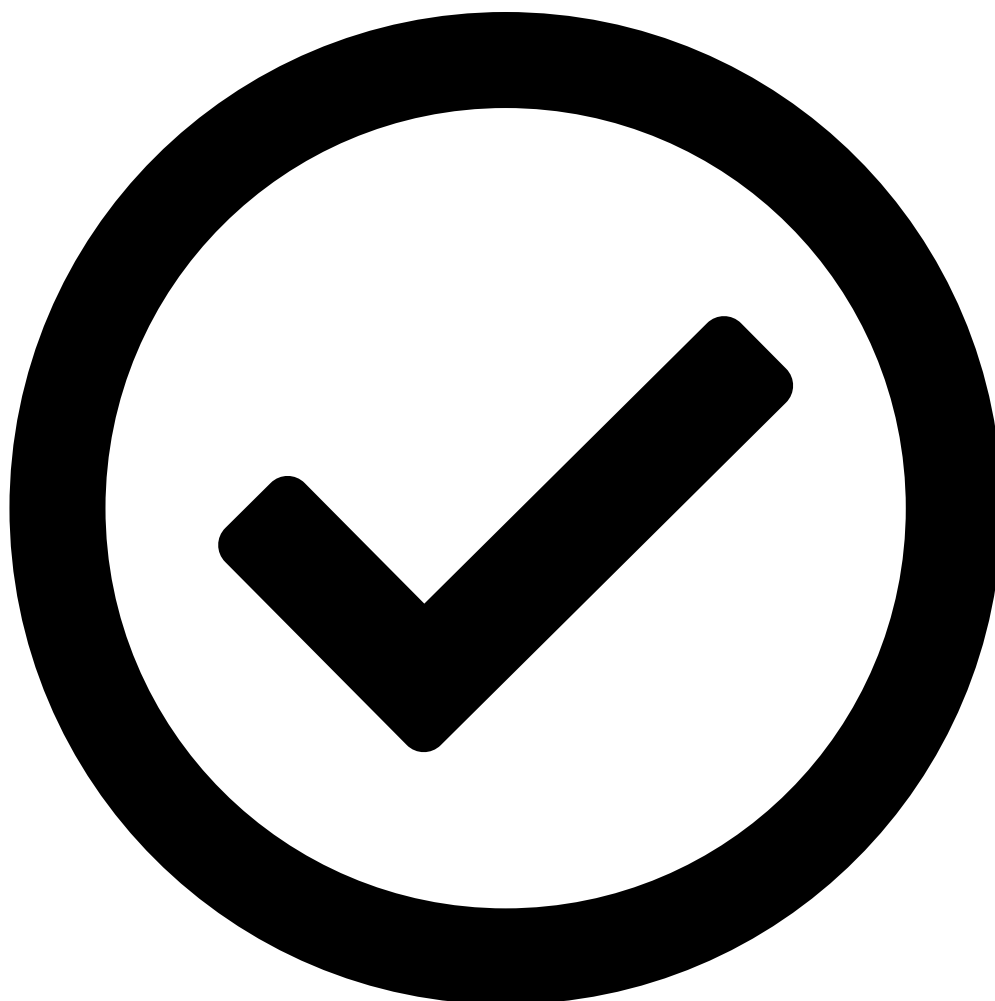
Take Action

Faster fixes, smarter decisions

✓ Less downtime | ✓ Faster troubleshooting | ✓ Scales effortlessly

Challenges

Conventional network analysis tools face significant limitations in handling the volume and complexity of modern network packet capture (PCAP) files.



- **Lack of Native AI Capabilities:** Traditional tools lack built-in AI for direct analysis of PCAP files, relying on manual inspection or rule-based systems. This makes identifying subtle patterns or anomalies time-consuming and prone to error.



- **Data**
Complexity and Decoding: Raw packet data is complex and requires extensive decoding prior to analysis. This adds time and complexity, hindering real-time insights or rapid incident response.



- **Difficulty in Deriving Actionable Insights:** Merely viewing packet data is insufficient; the real value lies in actionable insights like identifying threats or diagnosing performance issues. Traditional methods struggle to automatically glean these insights, demanding significant manual effort and domain expertise, leading to delayed responses.



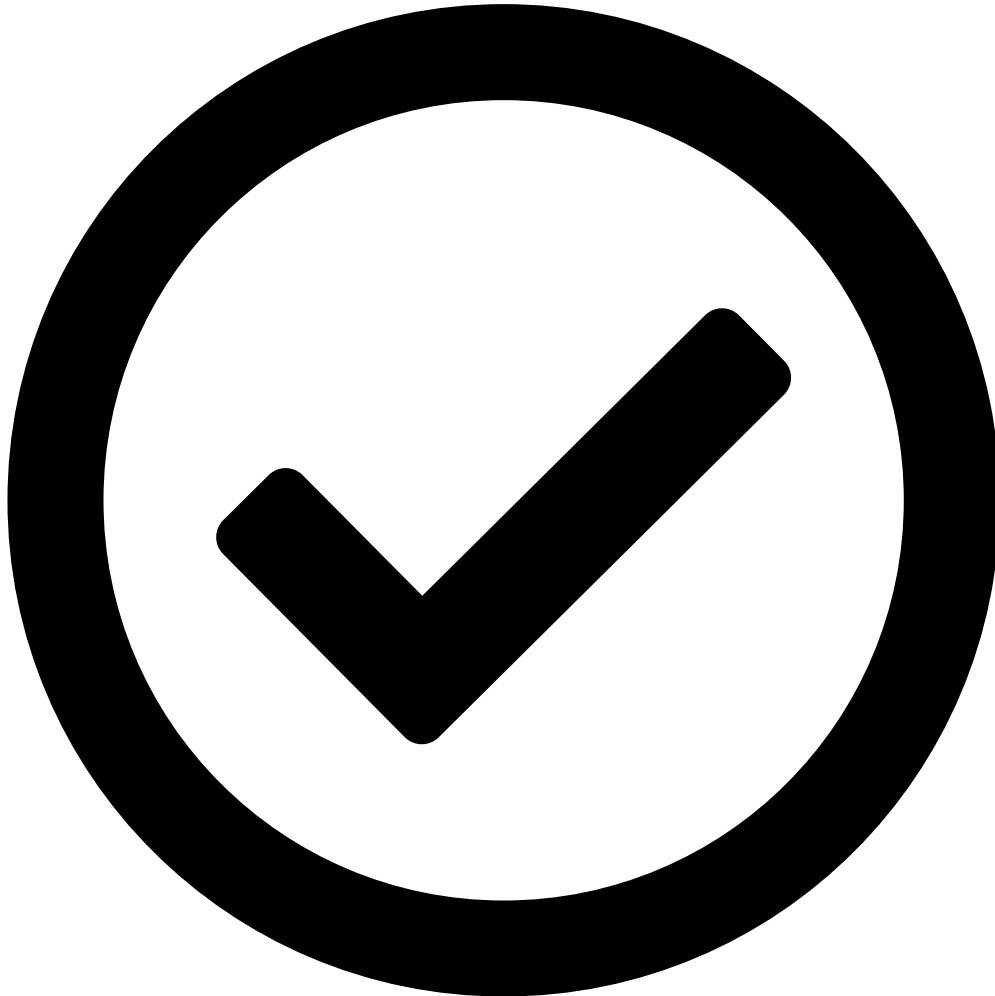
- **Scalability and Time Consumption:** With increasing network traffic, PCAP files become enormous, and conventional methods often struggle to scale efficiently. Manually sifting through vast amounts of data is inefficient, increasing Mean Time To Respond (MTTR).



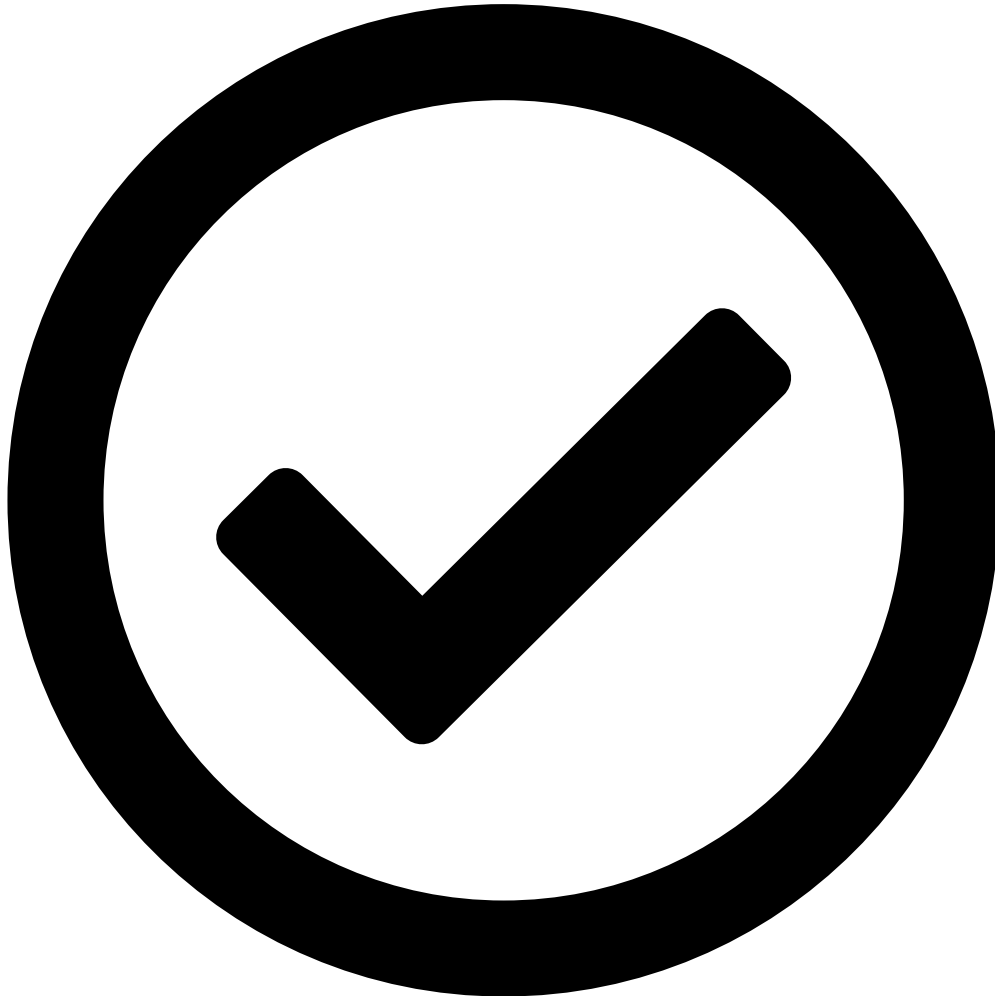
- **Limited Querying Capabilities:** Existing tools offer rigid filtering, restricting nuanced, context-aware investigations. Complex queries like "Show all SIP 401 Unauthorized responses with nonce values" are difficult to perform.

Our Solution:

TechTez addressed these pain points by developing an advanced, AI-powered packet analysis platform, placing automated intelligence and flexible query power directly into usKey Features:



- **Intelligent Packet Decoding:** Fully automated decoding transforms raw packet data into clean, structured records—removing manual complexity and speeding up analysis.



- **Natural Language AI Query Engine:** Users simply ask questions in plain English (“Which packets contain Call-ID 12345?” “Show me all RTP streams with payload type 96”), and the platform delivers actionable results instantly.



- **Actionable**
Insights via LLMs: Leveraging leading Large Language Models (ChatGPT, Ollama, Mistral, Gemini), the system identifies patterns, detects anomalies, and generates insights beyond traditional tool capabilities.



- **Comprehensive Protocol Support:** Deep analysis across all major protocols (SIP, RTP, DIAMETER, HTTP, GTP, TCP, UDP, IPv4/6, TLS/SSL, SCTP, NGAP, PFCP, and more).



- **Scalable & User-Friendly:** Optimized for performance with large datasets, the interface empowers both experts and non-specialists—democratizing access to critical network intelligence.

Traditional Packet Analysis vs AI-Powered Insights

Traditional Tools

- Massive PCAP files
- Manual, slow analysis
- Expert-only workflows
- Rigid filters
- Delayed response

High effort. Low visibility.

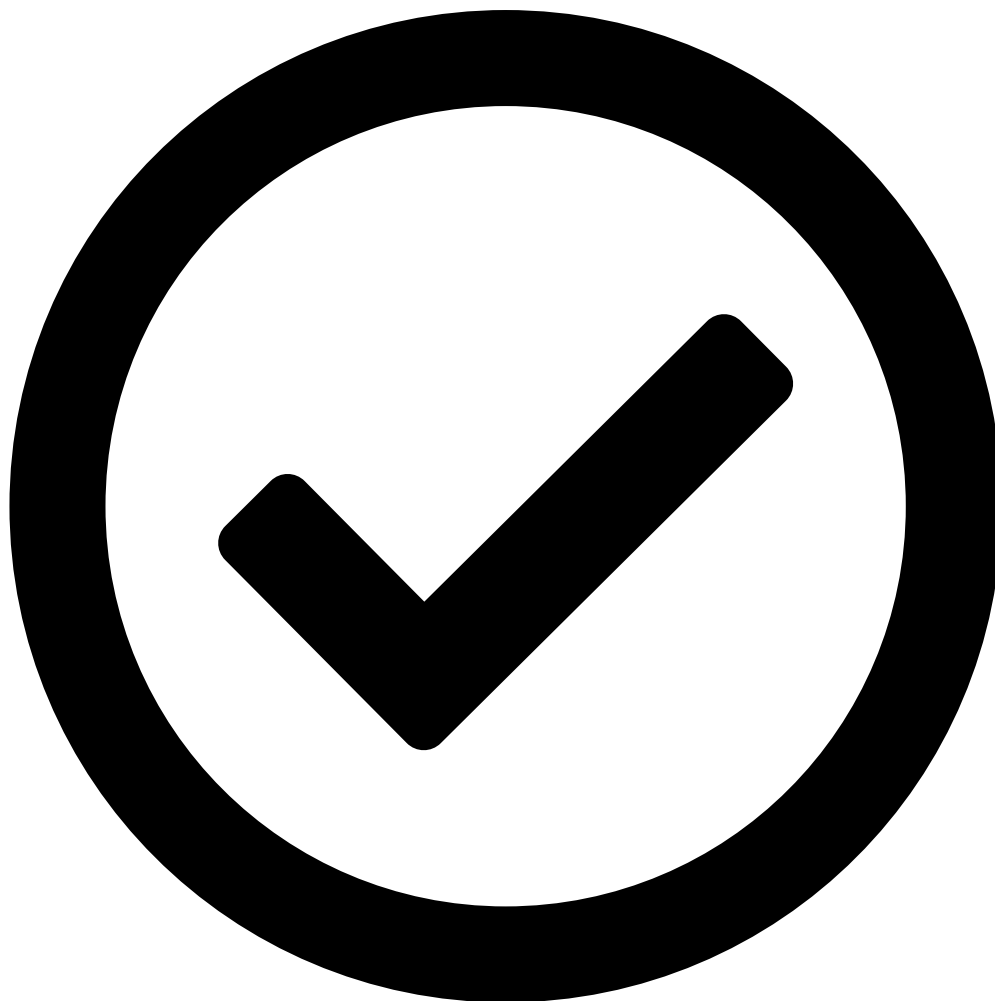
TechTez AI Platform

- Auto packet decoding
- Ask in plain English
- Instant insights
- Context-aware analysis
- Faster MTTR

From packets to answers.

70% faster response | 30% lower ops cost

Results & Impact



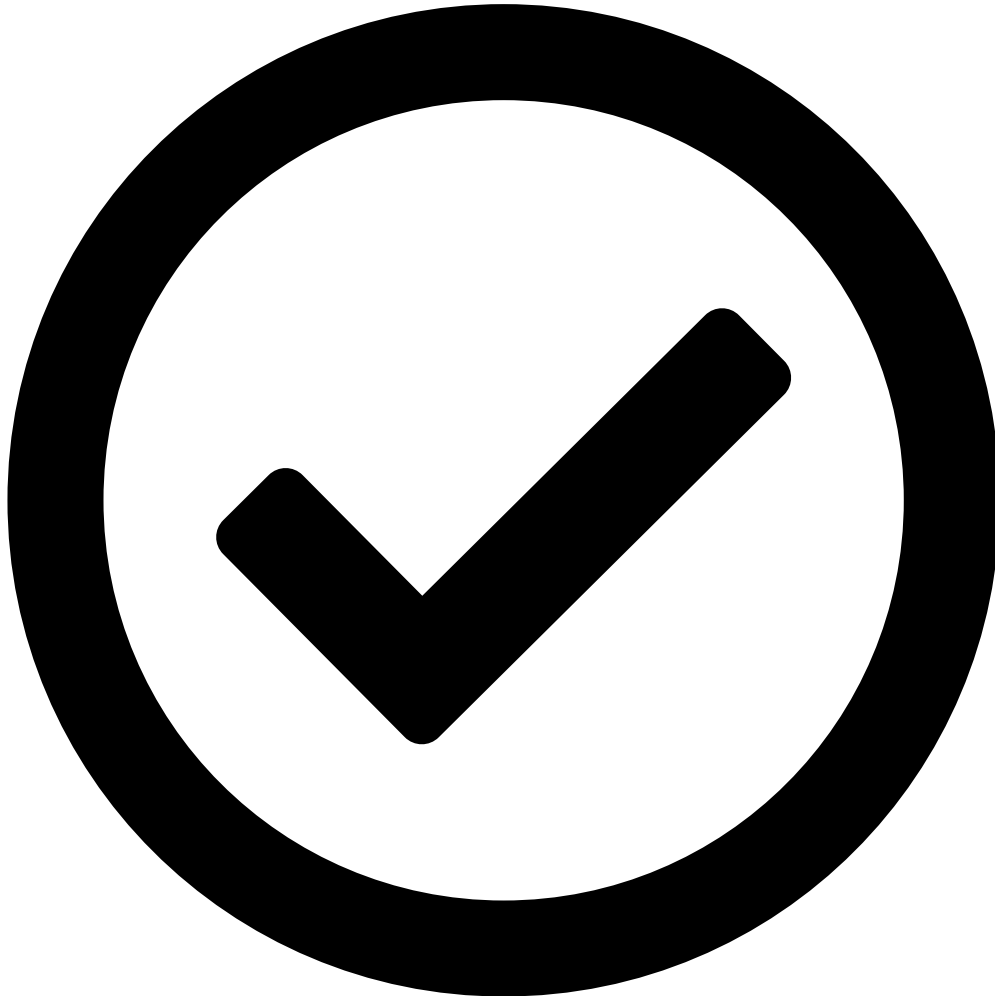
- **Faster, More Accurate Diagnostics:** Automated decoding and AI insights cut incident response time and reduced manual effort, freeing teams to focus on high-value tasks.



- Actionable
Intelligence: Proactive threat detection, performance monitoring, and troubleshooting—made possible in seconds, not hours.



- **Empowered Teams:** Anyone can perform complex packet analysis via natural language, eliminating the steep learning curve for new users.



- **Scale Without Limits:** The platform processes the largest PCAPs effortlessly, ensuring continuous effectiveness as network traffic grows.



- Deeper, Granular Insights: Rich protocol and field support enable precise, context-aware investigations, unlocking a complete view of network events.

Outcomes

Reduction in incident response time

70%

Lower operational costs

30%

Less unplanned downtime

45%

jump in customer satisfaction

25%
improvement in bandwidth utilization
Up to 15%

Our Thought Leadership Guides

- Case Study

[AWS vs Azure Cost Benchmarking: Architecture-Driven Cloud Cost Optimization in 2026](#)

Compare AWS and Azure cloud costs and learn why architecture, automation, and governance matter more than pricing for long-term efficiency.



AWS vs Azure Cost Benchmarking

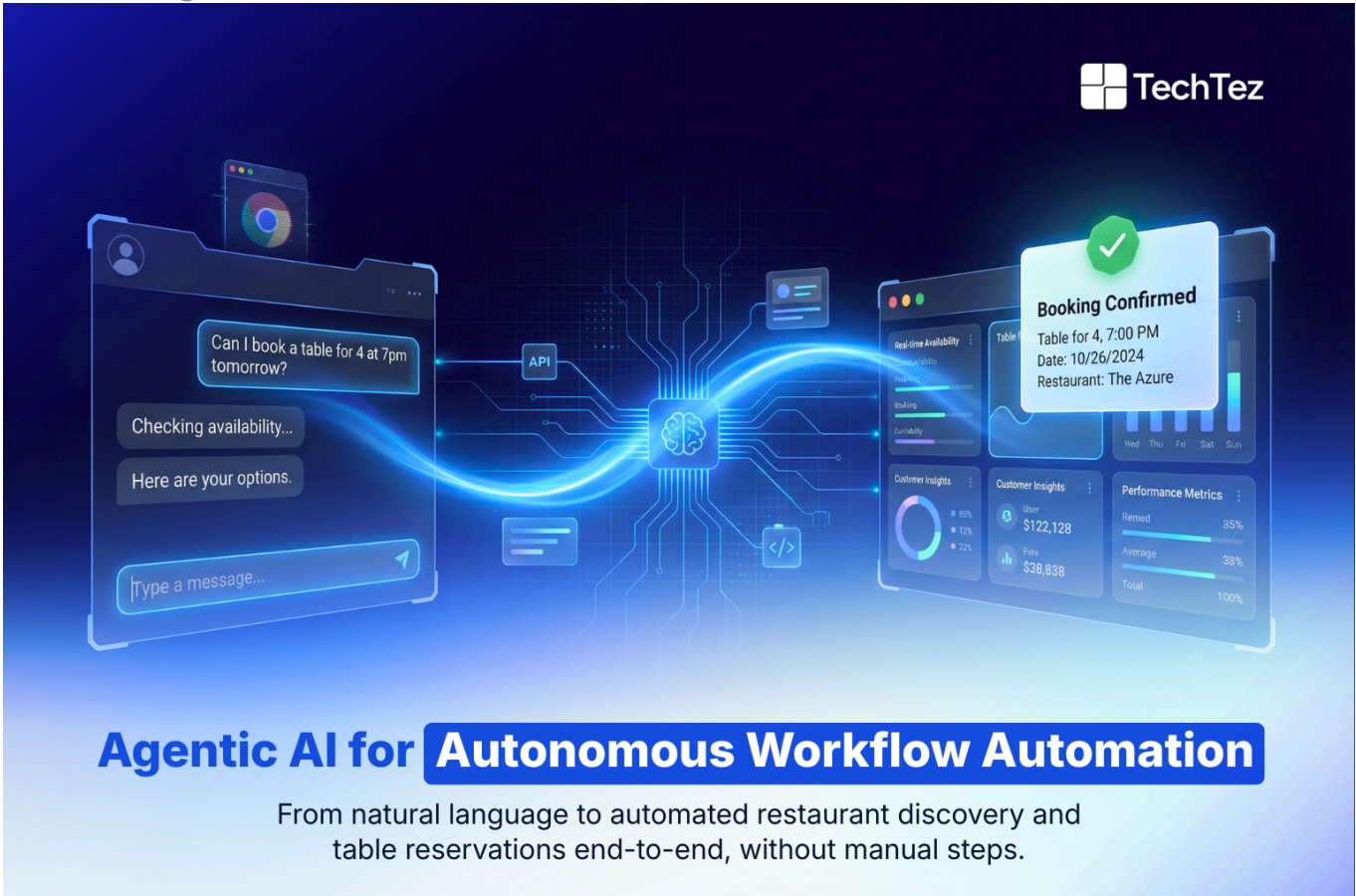
Architecture-Driven Cloud Cost Optimization in **2025**



- Case Study

Agentic AI Assistant Framework for Autonomous Task Execution

An agentic, multi-agent AI assistant that plans, executes, and completes tasks via secure tool orchestration and live APIs turning user prompts into real outcomes like bookings and itineraries.



The image is a promotional graphic for TechTez. It features a central blue brain icon connected to various digital elements. On the left, a chat interface shows a user asking "Can I book a table for 4 at 7pm tomorrow?", followed by a response "Checking availability... Here are your options." and a text input field. In the center, there are icons for "API" and a code editor. On the right, a dashboard displays a "Booking Confirmed" notification with details: "Table for 4, 7:00 PM", "Date: 10/26/2024", and "Restaurant: The Azure". Below the notification are charts for "Real-time Availability", "Customer Insights", and "Performance Metrics". The TechTez logo is in the top right corner.

Agentic AI for Autonomous Workflow Automation

From natural language to automated restaurant discovery and table reservations end-to-end, without manual steps.

- Case Study

AI-Driven Dermatology Platform for Accurate Diagnosis and Secure Digital Care

A mid-sized SaaS company specializing in HR and payroll management faced a growing barrier:



Building an Intelligent AI-Driven Dermatology Platform for Accurate Diagnosis and Digital Care

Secure, AI-Powered Skin Analysis with Human-in-the-Loop Clinical Validation