



CASE STUDY

Trip4Cure

Automates First-Pass Diagnostic Review with an AI Report Workflow Built on AWS and Shri Sai Tech

Executive summary

Trip4Cure lets patients upload medical images and reports — X-ray, MRI and lab documents — for a paid specialist review, a process handled today entirely by doctors. To give patients a faster and lower-cost option for routine cases, Trip4Cure partnered with Shri Sai Tech (SST) to design and build a proof-of-concept AI-driven workflow that automatically generates a diagnostic report from an uploaded scan or lab document.

The AI report is priced lower than a full specialist review, released to the patient only after payment, and runs in parallel to Trip4Cure's existing specialist-review path — with an easy upsell into a paid second opinion. SST delivered the POC as a set of reusable API modules built on AWS, ready for Trip4Cure to integrate directly into its platform.

The Challenges

► Challenge 1 – AI MRI Scan Analysis

Specialists review raw MRI image series slice by slice, typing findings into free-text notes with no structured report template and no automated flagging.

► Challenge 2 – AI X-ray Scan Analysis

X-ray images move through a single first-in-first-out queue for manual radiologist review, regardless of urgency or case complexity.

► Challenge 3 – AI Lab Report Analysis

Lab values are re-keyed by hand from PDF or scanned reports to compare against prior results — manual, error-prone and with no automated abnormality flagging.

► Challenge 4 – HIPAA-Compliant Upload

Uploaded files have no standardised retention schedule, no server-side encryption and no time-limited access controls.



About Trip4Cure

Trip4Cure is an e-platform connecting patients and doctors around the world, giving users access to trusted medical and wellness tourism services — high-quality healthcare, specialised treatments, elective procedures and rejuvenating wellness experiences — at competitive prices.

Every trip is backed by market research, global hospital and clinic partnerships, legal and compliance oversight, tailored treatment and travel packages, and continuous client support before, during and after the trip.

Preshit Dalal

Principal Director – AI/ML Operations

Preshit Dalal is a hands-on cloud architect specialising in Azure and AWS across AI/ML Ops, IoT and DevSecOps, with prior experience on the Kyndryl US Cloud Team.

He is also the founder of Trip4Cure, a medical tourism and wellness platform connecting patients with hospitals worldwide, and PuraVidaSportz, an India-focused outdoor gear venture.



Simplify Diagnostic Workflow with AWS

Amazon Web Services (AWS) gave Trip4Cure a secure, scalable, HIPAA-eligible foundation for adding AI-powered diagnostics without building or maintaining large-scale AI infrastructure in-house.

Using Amazon Bedrock foundation models — Amazon Nova Lite, Amazon Nova Pro, Anthropic Claude Sonnet 4.5 and Amazon Titan Text Embeddings V2 — alongside SSE-encrypted Amazon S3 storage, Trip4Cure gains access to advanced image and text analysis while keeping model costs controlled and predictable for a POC-scale deployment.

Why Shri Sai Tech?

➤ Trip4Cure selected SST for:

- Healthcare technology and HIPAA-aligned application development experience
- AWS cloud architecture and Amazon Bedrock implementation expertise
- Multi-model AI orchestration — balancing foundation models and open-source models by case complexity and cost
- An API-first delivery approach that plugs directly into Trip4Cure's existing platform
- Ability to scope, build and deliver a working POC on a fixed 4-week timeline

The Solution

SST designed and built four API modules plus a supporting orchestration and cost-control layer, all delivered on AWS.

➤ AI MRI Scan Analysis

Analyses an uploaded MRI scan using Amazon Nova Pro and returns a structured diagnostic report.

➤ AI X-ray Scan Analysis

Analyses X-ray images through the same Bedrock pipeline and returns a structured report.

➤ AI Lab Report Analysis

Extracts lab text without third-party OCR, flags abnormalities and compares results against prior reports using Amazon Titan Text Embeddings V2. Simpler cases route to Amazon Nova Lite.

➤ HIPAA-Compliant Secure Upload

Segregated, SSE-encrypted S3 buckets with authorised-only access limited to a 5-minute window and automatic expiry.

➤ Model orchestration and cost control

Routes each case to the right model by complexity with automatic fallover, and tracks per-module spend on a cost dashboard with consumption guardrails.

➤ Configurable report output

Reports follow a configurable template, delivered as PDF and HTML, each carrying an auto-generated AI-assisted disclaimer.



AWS Services and AI Models Used

➤ Foundation Models

Amazon Nova Lite amazon.nova-lite-v1:0 - Lower-complexity case analysis - Cost-efficient first-pass triage - Routed to automatically by the orchestration layer	Amazon Nova Pro us.amazon.nova-pro-v1:0 - MRI scan image analysis - X-ray image analysis - Findings extracted from image series
Anthropic Claude Sonnet 4.5 (Amazon Bedrock) us.anthropic.claude-sonnet-4-5-20250929-v1:0 - Structured diagnostic report generation - Complex case reasoning - Patient follow-up question answering	Amazon Titan Text Embeddings V2 amazon.titan-embed-text-v2:0 - Semantic comparison of lab results against a patient's prior reports - Matching of related findings across report history

➤ AWS Cloud Services

- Amazon Bedrock — foundation model access and orchestration - Amazon S3 — segregated, SSE-encrypted buckets with time-limited access and expiry	- Trip4Cure AWS staging / production environment — target for client-key migration - SST AWS account — controlled build-and-test environment for the POC
--	--

➤ Delivery & Governance

- Source code delivered via GitHub, owned and modifiable by Trip4Cure
- API integration secured via API key plus short-lived JWT bearer tokens over HTTPS (OAuth 2.0 client-credentials pattern), with key rotation
- POC scoped to dummy patient data only; real patient data, production go-live, marketing and front-end development are explicitly out of scope

Results — what the POC delivers

As a proof of concept, the engagement was scoped to validate the technical approach on dummy data rather than to report production-scale metrics. Within the 4-week timeline (20 July – 7 August 2026), the POC delivered:

- **Four working API modules**
 - MRI analysis, X-ray analysis, lab report analysis and secure upload — built and tested in SST's AWS environment.
- **An end-to-end workflow**
 - From login and upload through payment-gated report release, with an upsell path into the existing specialist-review workflow.
- **Controlled retention and AI spend**
 - A configurable retention policy (1 month by default) and a model-orchestration layer that keeps AI consumption within an estimated \$50–\$100/month for POC-level usage.
- **A defined security model**
 - API key plus short-lived JWT bearer tokens (OAuth 2.0 client-credentials pattern), encrypted storage and time-limited file access.
- **Source code handover**
 - Delivered via GitHub, ready for Trip4Cure to migrate into its own staging environment with client-managed keys.



Benefits

- **Faster turnaround for routine cases —**
AI generates a structured report in near real time versus hours-to-days for manual specialist review.
- **Lower-cost entry point —**
Patients get a faster, lower-priced AI report with a clear upsell path to a paid specialist second opinion.
- **Reduced manual review load —**
Automating routine cases frees specialist time for complex ones.
- **Modular, reusable architecture —**
Every module ships as an API that plugs directly into Trip4Cure's existing platform.
- **Controlled AI cost —**
Orchestration and a spend-tracking dashboard keep model consumption predictable.
- **HIPAA-aligned security by design —**
Encryption, time-limited access and payment-gated release are built into the workflow from day one.

Next steps

- Migrate the validated modules from SST's AWS environment into Trip4Cure's staging environment with client-managed keys
- Move from dummy data to controlled testing with representative real-world data ahead of production go-live
- Extend the cost dashboard and guardrails as usage scales beyond POC volumes
- Scope front-end integration and go-to-market activity for production launch (both out of scope for the POC)

About Shri Sai Tech LLC DBA SST

SST is an AWS Partner specializing in AI-driven, cloud-native architecture and secure, compliant solutions across a wide range of industries — including healthcare, finance, education, retail, manufacturing, logistics, energy, government and public sector, telecommunications, and media and entertainment. Partnering closely with our clients, SST rapidly designs and deploys production-ready AI platforms on AWS, bringing AI-powered capabilities to market with speed and confidence.

