



happiest minds
AI FIRST. AGILE ALWAYS.

AI-Powered Ambient Clinical Documentation for Intelligent Healthcare Delivery



About the Client

Happiest Health is a healthcare & wellness company from India that provides integrated, patient-centric services through these primary methods: preventative care, diagnostic testing, specialty consultations, and digital healthcare offering.

It operates within the Healthcare and Life Sciences Sector, serving patients across urban and upcoming markets through hybrid model of physical care delivery and virtual engagement. Happiest Health is presently pursuing their digital transformation initiative to enhance clinical efficiency, improve patient outcomes and modernize their care delivery workflow.

Client Requirements

Happiest Health faced a critical challenge in reducing physician documentation burden while maintaining clinical accuracy, compliance, and patient engagement across high-volume outpatient consultations.

Manual EMR documentation consumed significant physician time, reducing patient interaction and increasing administrative workload. As patient volumes increased, inefficiencies and clinician fatigue also increased.

Traditional transcription and rule-based systems were inadequate for handling complex, multi-turn clinical conversations and generating structured clinical outputs.



Key Requirements Included:

1 Excessive Physician Burnout

Physicians spent a lot of time on documentation of tasks resulting to fatigue and restricting their ability to focus on core clinical responsibilities.

3 Inconsistent Documentation

Variability in manual note-taking brings in inconsistent clinical records, affecting the accuracy in billing invoices and audit readiness.

2 Constraints in Scalability

High patient volumes required additional physician effort, creating operational bottlenecks and limiting scalability.

4 Lowered Patient Engagement

Variability in manual note-taking brings in inconsistent clinical records, affecting the accuracy in billing invoices and audit readiness.

Happiest Minds Solution

Happiest Minds designed and implemented an AI-powered Ambient Clinical Documentation (ACD) platform to automate clinical note creation and streamline physician workflows.

The solution leverages Generative AI, speech recognition, and event-driven architecture to convert doctor-patient conversations into structured, compliant clinical documentation in real time.

Conversational Clinical Intelligence

1 Speech-to-Text Processing

The solution stores the physician patient interaction and transcribes spoken conversations into text, accurately using real-time speech recognition.

2 AI-Driven Clinical Summarization

These models are capable of taking a multi-turn clinical dialogue as input, and drive short, context aware summaries, suitable for clinical applications.

3 SOAP Note Generation

Automated structuring of clinical outputs into standard SOAP (subjective objective assessment, and plan) formats is performed for consistency and usability.

Real-Time Processing & Scalability

1 Event-Driven Architecture

The platform is created on an event-driven architecture which can give seamless processing of streaming data with low latency and high availability

2 Scalable Workload Handling

The system dynamically scales to support increasing consultation volumes without impacting performance or response time.

3 Low-Latency Output Delivery

Clinical notes are produced in almost real-time, resulting in immediate availability for physicians to review and validate.

Integrated AI & Data Ecosystem

1 Cloud-Native AI Infrastructure

Depends on enterprise cloud solutions to create secure, scalable and robust solution to serve end-to-end clinical workflows.

2 Model Hosting and Optimization

AI models are deployed and fine-tuned to maintain domain-specific accuracy in healthcare documentation.

3 Secure Data Management

Patient data is managed under strict security protocols, meeting healthcare standards, privacy and security needs.

Technology Stack

- **Generative AI & ML:** Amazon Bedrock, Amazon SageMaker
- **Speech Processing:** Amazon Transcribe
- **Application & Orchestration:** AWS Lambda, Amazon ECS Fargate
- **Data & Storage:** Amazon S3, DynamoDB, OpenSearch
- **Integration & Streaming:** API Gateway, EventBridge, Kinesis
- **Security & Monitoring:** IAM, KMS, CloudWatch

Value Delivered

✓ Reduced Documentation Time

Automation significantly minimized manual note-taking efforts

✓ Improved Clinical Accuracy

Structured AI-generated outputs ensured consistent and reliable documentation

✓ Enhanced Patient Engagement

Physicians spent more time interacting with patients, improving care experience

✓ Scalable Operations

The platform efficiently handled increasing patient volumes without additional burden on clinicians

✓ Operational Efficiency

Reduced dependency on manual transcription and administrative processes

✓ Compliance Readiness

Standardized documentation improved auditability and regulatory adherence

About Happiest Minds

Happiest Minds Technologies Limited (BSE, NSE: HAPPSTMNDS) is an AI First, customer-centric digital engineering company committed to delivering 'Happiest People . Happiest Customers'. With an integrated approach that spans from chip to cloud, Happiest Minds delivers secure and scalable solutions across product engineering, cybersecurity, analytics , and automation platforms. Happiest Minds brings purpose and precision to every engagement, helping enterprises solve complex business challenges and fast-track their digital evolution across industry sectors such as Banking, Financial Services & Insurance (BFSI), EdTech, Healthcare & Life Sciences, Hi-Tech and Media & Entertainment, Industrial, Manufacturing, Energy & Utilities, and Retail, CPG & Logistics.

Happiest Minds has been honored by both the Golden Peacock Awards and the Institute of Company Secretaries of India (ICSI) for its exemplary Corporate Governance practices. Guided by its mission of 'Happiest People . Happiest Customers' and consistently recognized as a great place to work, Happiest Minds is headquartered in Bengaluru, India, with a global presence across the Americas, UK, Europe, Australia, the Middle East, Africa, and Asia.

To know more about our offerings. Please write to us at business@happiestminds.com



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