SMART CLAIMS:

AI-POWERED MEDICAL AID CLAIMS OPTIMISATION

Methealth Hack -4- Health Hackathon

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PROBLEM STATEMENT

Official challenge: Optimising Medical Aid Claims with AI

- Current manual processing creates bottlenecks and inefficiencies

Four critical areas:

- **Claim Validation:** Manual verification is time-consuming and error-prone
- **Fraud Detection:** Existing systems miss sophisticated fraudulent patterns
- **Benefit Eligibility Checking:** Complex rule verification takes days
- **Turnaround Time:** Patients wait weeks for claim approvals

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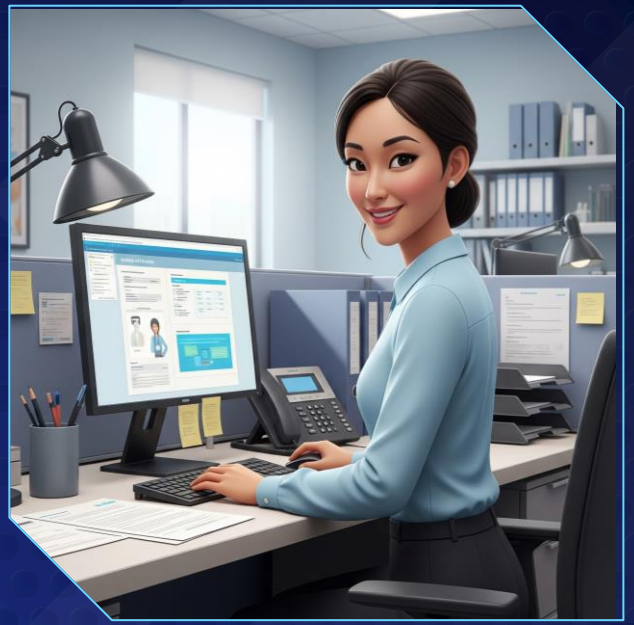
OUR SOLUTION

Direct Response to Challenge: AI-powered system addressing all four key areas

Core Capabilities:

- **Intelligent Claim Validation:** AI agent integrated in workflow for automated verification and process
- **Fraud Detection:** Pattern recognition and anomaly detection
- **Benefit Eligibility Checking:** Instant benefit verification via AI
- **Turnaround Time:** From weeks to minutes

Compliance First: Built-in data security and regulatory adherence



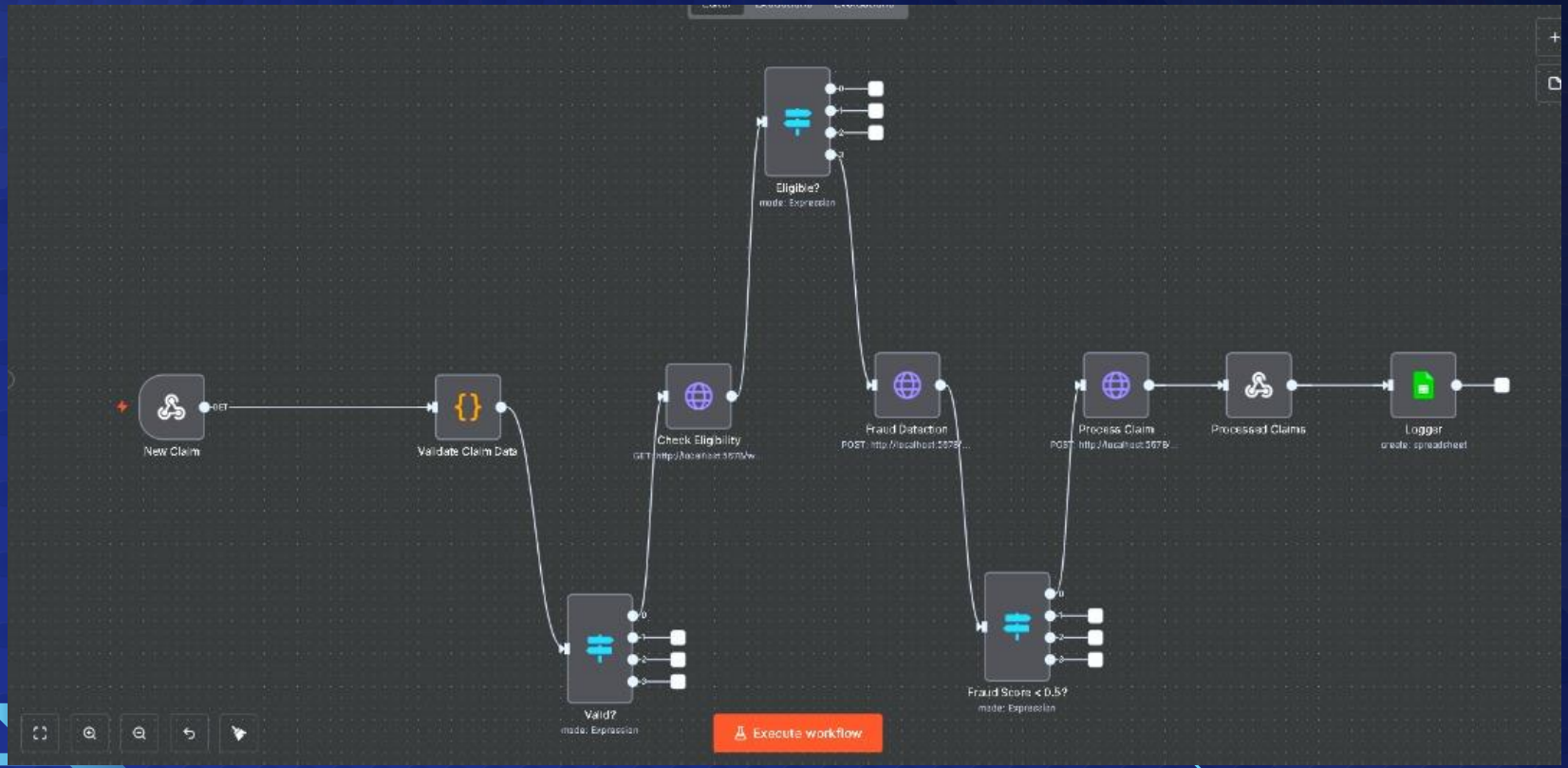
Development Approach

Extensive Research Phase:

- In-depth industry analysis and claims process mapping
- Technology integration trends in medical aid systems
- Focused on Namibian market requirements and regulations

Key Finding: No existing Namibian-specific claims software solutions
Our Advantage: Built from scratch for local market needs
Result: Tailored solution addressing Namibian healthcare landscape

AI AGENT WORKFLOW



TECHNOLOGY STACK

Programming Languages

JavaScript & Python

AI/ML Frameworks

N8n Framework

Database

Django

APIs

Google Gemini 2.0 Flash

KEY ACCOMPLISHMENTS

Start-Up

Having developed a start-up with no existing software in the Namibian market as a reference

Logic

Having figured a logical workflow through the system from backend to frontend with AI integration

Accessibility

The system is accessible by the both the claims administrators and healthcare providers

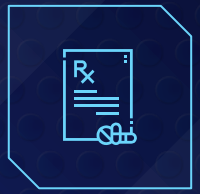
FUTURE ENHANCEMENTS

Scalability

Integrate more resources within the system

Stronger Detection

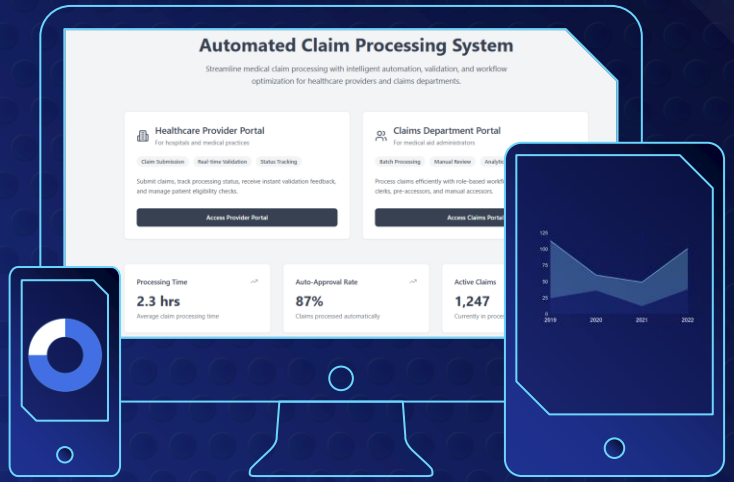
Advanced ML models with deeper fraud pattern recognition



Improved Features

Predictive analytics

MOCKUP


Automated Claim Processing System
Streamline medical claim processing with intelligent automation, validation, and workflow optimization for healthcare providers and claims departments.
Healthcare Provider Portal
For hospitals and medical practices
Claim Submission
Real-time Validation
Status Tracking
Submit claims, track processing status, receive instant validation feedback, and manage patient eligibility checks.
Access Provider Portal
Claims Department Portal
For medical aid administrators
Batch Processing
Manual Review
Process claims efficiently with role-based workfl
clerks, pre-accessors, and manual accessors.
Processing Time
2.3 hrs
Average claim processing time
Auto-Approval Rate
87%
Claims processed automatically
Active Claims
1,247
125
100
75
50
25
0
2019
2020
2021
2022

Team

Group 2: Smart Claims

- Israel Shingenge
- Honoré Kayumba
- Monteo Rossner
- Luis-Peter Shinyala
- Marleny Dassala

GitHub Repository:
https://github.com/Israel-Shingenge/Hack4Health.git

Thank You!

Does anyone have any questions?