



# AI BulkSMS Shield

AI-Powered SMS Fraud Detection & Protection for Africa

Protecting millions from SMS scams with intelligent, real-time fraud detection powered by Google AI technologies.



# The Growing Threat of SMS Fraud

Across Kenya and Africa, SMS-based fraud is reaching epidemic levels. Every day, thousands fall victim to sophisticated scams—fake MPESA reversals, fraudulent loan offers, bogus cash prizes, and deceptive job opportunities.

The most vulnerable? First-time smartphone users, elderly citizens, small business owners, and students who lack tools to identify these threats. Current solutions are reactive, not preventive, leaving a critical gap in digital security.

# What If Your Phone Could Protect You Automatically?



## Real-Time Scanning

Every incoming SMS is analyzed instantly as it arrives on your device



## AI Classification

Vertex AI identifies fraud patterns, spam content, and risky messages with precision



## Clear Explanations

Genkit explains exactly why a message is suspicious in plain language



## Instant Protection

ADK triggers immediate alerts and protective workflows automatically

# Powered by Google's Advanced AI Stack

## Vertex AI

### The Detection Engine

- Fine-tuned fraud classifier
- Embedding-based similarity detection
- MPESA structure analysis
- Pattern recognition across networks

## Genkit

### The Explainer

- Conversational reasoning agent
- Plain-language risk explanations
- Context-aware assistance
- User education support

## ADK

### The Action Layer

- Event-driven workflows
- Automated notifications
- Report generation
- Daily scanning routines

# How AI BulkSMS Shield Works



## SMS Received

Message captured and sent securely to Vertex AI



## AI Analysis

Risk evaluation and fraud pattern matching



## Explanation

Genkit generates clear reasoning



## Action Taken

ADK executes protection workflow



## Logged & Visualized

Data stored in Firebase, shown on dashboard

# What Makes This Solution Unique

## Proactive, Not Reactive

Unlike Safaricom Zuri, AI BulkSMS Shield **automatically detects and prevents fraud** before users can be tricked—no manual checking required.

## Universal Network Coverage

Works seamlessly across **Safaricom, Airtel, and Telkom**, protecting all Kenyan mobile users regardless of their carrier.

## Built for African Fraud Patterns

Specifically trained on **Kenyan and African scam tactics**, including fake MPESA receipts, edited screenshots, and local fraud schemes.

## Dual-Purpose Platform

Designed for both **individual users and businesses**, with enterprise dashboards for shops verifying customer payments.



# Real-World Impact



## Financial Protection

Prevents monetary losses from sophisticated SMS scams targeting vulnerable users and small businesses



## Business Security

Shop owners can verify MPESA payments instantly, eliminating losses from fake confirmation messages



## Vulnerable Population Safety

Protects students, elderly citizens, and first-time smartphone users from digital exploitation



## Scalable Security Platform

Creates foundation for continent-wide digital safety infrastructure across African markets



# Dashboard & User Experience



## Intelligent Insights

Users and businesses access a comprehensive dashboard that visualizes:

- Fraud attempt trends over time
- Risk level classifications with explanations
- Automated logs of all suspicious messages
- Network-wide threat patterns
- Custom alerts and notification preferences

All data securely stored in Firebase for reliable access and analysis.



# Future Scalability & Expansion

01

## PDF Receipt Verification

Expand AI capabilities to scan and validate PDF documents and payment receipts

02

## Credit Bureau Integration

Connect with CRB systems for real-time loan application verification and fraud prevention

03

## Enterprise Solutions

Launch dedicated business dashboards with multi-user management and advanced analytics

04

## Regional Intelligence Network

Build pan-African anti-fraud platform sharing threat intelligence across countries






# Making Communication Safer for Millions

AI BulkSMS Shield demonstrates the transformative power of Google Genkit, Vertex AI, and ADK working in harmony—delivering a **simple, practical, and scalable solution** to one of Africa's most pressing digital security challenges.

This is more than fraud detection. It's about building trust in digital communication, empowering businesses, protecting vulnerable populations, and creating a safer digital future for Africa.

 **Ready to protect millions?** Let's bring AI BulkSMS Shield to market and transform mobile security across the continent.