

# MoMo 2.0

Unlocking Financial Literacy, Empowerment and Mobile Money  
Revolution with AI-Powered Innovation

Blessings Mambwe

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# Introduction

Fintech serves 3.8 billion people worldwide, facilitating a staggering 300 billion daily transactions. According to experts, the most significant challenges in fintech include:

- **Regulations and Compliance:**

- ▶ Navigating diverse regulations across regions or cities, affecting various types of businesses.
- ▶ Unpredictable governmental laws

- **Data Privacy:**

- ▶ Addressing concerns related to the violation of human rights.
- ▶ Safeguarding confidential user information from falling into the hands of fraudsters.

- **Customer Education:**

- ▶ Tackling the challenge of users' limited understanding of how to effectively use mobile money services.
- ▶ Enhancing knowledge regarding potential risks associated with these services.

- **Security and Fraud:**

- ▶ Combating various forms of fraud that pose threats to financial transactions and user trust.

# Current Progress

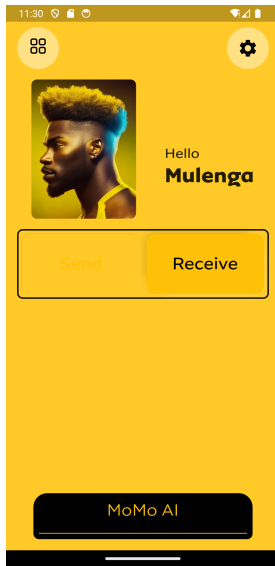


Figure: Image showing dashboard menu, app still in development.

## Problems Addressed

- **Regulation and Compliance:** MoMo 2.0 provides users with answers to questions regarding compliance and regulations in Zambia, all through the MoMo AI chat assistant.
- **Data Privacy:** The app eliminates the need for exposing names and numbers by enabling transactions using QR codes.
- **Customer Education:** MoMo 2.0 serves as a comprehensive resource for answering all user questions regarding MTN mobile money services.
- **Security and Fraud Detection:** The app employs a sophisticated machine learning algorithm to assess account risk and trustworthiness based on historical transactions and other parameters.
- **Accounting Assistance:** Utilizing MoMo AI, the app acts as a junior accountant, handling basic financial tasks like interest calculations, risk assessments, and invoice generation.

# Product Features

## MoMo AI Assistant

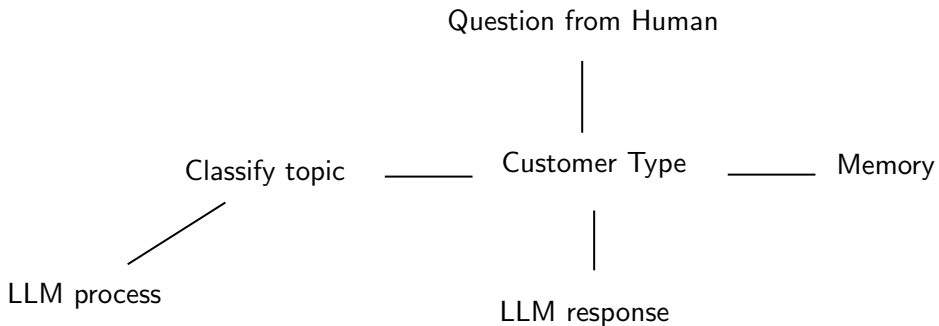
Is an advanced AI assistant that is trained on MTN mobile money services, regulations and compliance laws in Zambia, types of financial fraud, and other information related to financial literacy.

It can answer questions related to MTN services

- 'What is patumba' *answer* - 'Patumba is a Mobile-Based Digital Savings/Investment product offered by Kongola & Savings .. ' *[actual response from MoMo AI which is still in development]*

It can advice whether or not a client is showing fraud e.g

- 'I receive a message from an unknown number asking me to send a k100 to avoid my sim being blocked, should I do it ? ' - *answer*  
'MTN Mobile Money or any legitimate service provider will not ask you to send money to ... '



# Current Progress



```
chain({"question": "what saving schemes does mtn mobile money have?"}, return_only_outputs=True)
```



```
{'answer': ' MTN Mobile Money has saving schemes such as Patumba, a Mobile-Based Digital Savings/Investment product available on MTN Mobile Money provided by Barclays Bank.\n',  
  'sources': ''}
```



```
chain({"question": "what is patumba saving?"}, return_only_outputs=True)
```

```
{'answer': ' Patumba is a Mobile-Based Digital Savings/Investment product offered by Kongola & Savings, which also offers the Hobbiton Money Market Unit Trust Fund for a minimum investment period of 93 Days.\n',  
  'sources': ''}
```

**Figure:** Code snippets demonstrating authentic responses from the MoMo AI, which has been trained on local MTN data.

# Product Features

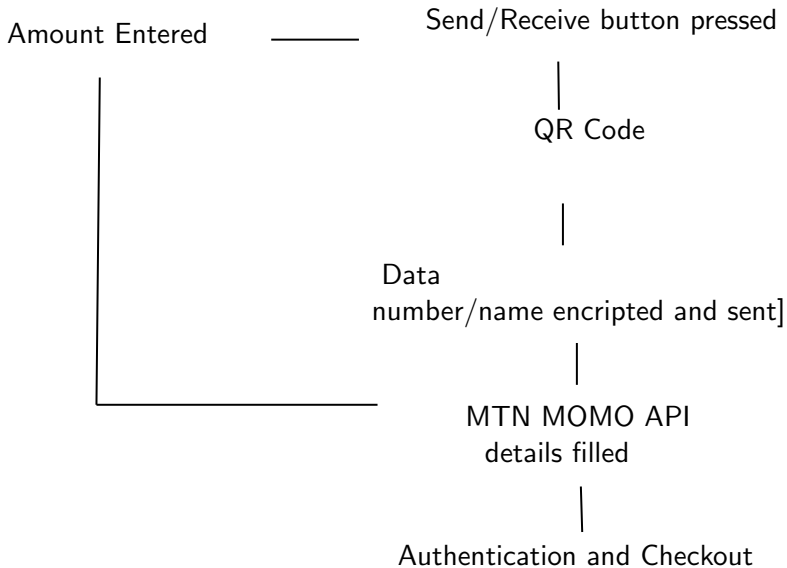
## Scan to Send/Receive

This features eliminates the need for personal users to send/receive money using QR code against other users or through the agent.

*Currently, MTN launched the Scan to Pay using QR codes however its only for merchants MoMo 2.0 uses scan to send in order to*

- Send or receive money from personal accounts/agents without the need to expose the phone number and names which are confidential information





# Product Feature

## Trust Score Algorithm

MoMo 2.0 uses the singular value decomposition machine learning algorithm to encrypt and analyze historical transactions, licenses, locations, and other parameters to assign a trust score to a number, thereby alerting the sender of the risk and trust level.

SVD is a powerful mathematical technique used to decompose data matrices, such as financial transaction records.using 3 matrices:  $\mathbf{U}$ ,  $\Sigma$ , and  $\mathbf{V}^T$ , which can be computed through the following mathematical equations:

$$\mathbf{X} = \mathbf{U}\Sigma\mathbf{V}^T$$

Here  $\mathbf{U}$  is the left singular matrix.,  $\Sigma$  is a diagonal matrix with singular values. $\mathbf{V}^T$  is the transpose of the right singular matrix.  
thereby archiving **Pattern Discovery** to aids in identifying transaction groups or anomalies, which may indicate potential fraudulent activities.