

CHARITY DONATION SYSTEM

TEAM: DATA SQUAD

**DOMAIN 1 – SECURITIES
COMMISSION MALAYSIA**



TASK



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WebApp Development



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Blockchain Techonology



GOH SIN HUA

WebApp Development



WONG NENG HORNG

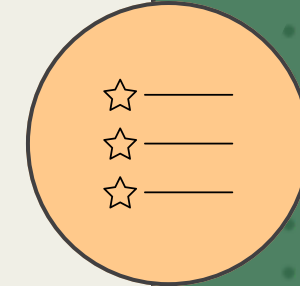
AI Model Training



BRYAN CHO JI

Blockchain Techonology

PROBLEM STATEMENT



- How can we ensure full transparency in donation collection and fund disbursement?
- How can we automate and optimize the donation distribution process to ensure it reaches those most in need?
- How can we make the charity system more accessible and inclusive for underserved or unbanked communities?

TECHNOLOGIES & APPROACHES

01

Blockchain & Smart Contracts

02

Mobile & Digital Payment Solutions

03

Artificial Intelligence & Machine Learning

04

Decentralized Finance

05

Crowdfunding & Impact Investing Platforms

06

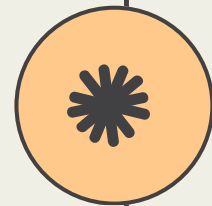
Data Analytics & Visualization Tools

07

Cloud & API Integration



BLOCKCHAIN & SMART CONTRACTS



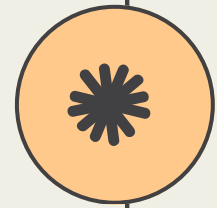
PURPOSE:

Build an unalterable and verifiable donation record to enhance public trust

Our implementation:

- Use Ethereum Sepolia testnet to store all donation and spending activities on-chain.
- Every donation and fund disbursement is written into a public smart contract
- All transactions are immutable and auditable

MOBILE & DIGITAL PAYMENT SOLUTIONS

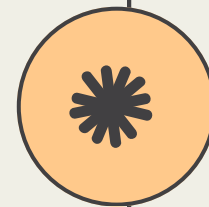


PURPOSE: Offer user-friendly donation experience with popular Malaysian payment methods.

Our implementation:

- Use HitPay Sandbox API to integrate the following payment methods:
 - FPX transfer
 - Credit/debit card
 - Touch n GO

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING



PURPOSE:

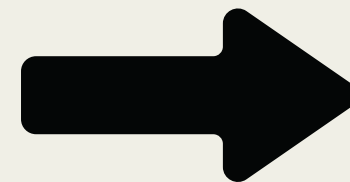
Automatically identify those who need help the most and improve resource allocation efficiency.

Our implementation:

- Use Random Forest Classifier model

Features

- Age
- Income
- Family size
- OKU status
- Amount request



Low, Medium, High priority

DECENTRALIZED FINANCE

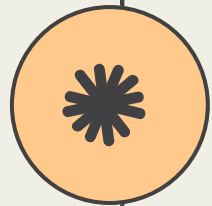


PURPOSE: Build donor trust through transparency.

Our implementation:

- Donations to campaigns are recorded and pooled transparently.
- Funds are disbursed based on the campaign goal or upon organizer request.
- Smart contracts can automate milestone-based or time-based disbursement, ensuring fair use of funds.

CROWDFUNDING & IMPACT INVESTING PLATFORMS



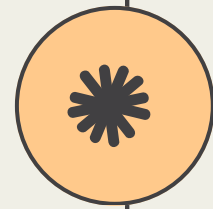
PURPOSE:

Let the public participate in supporting campaign, ensure transparent

Our implementation:

- Admin initiates Campaign
- Anyone can donate
- Each donation goes into a blockchain
- The use of funds available for everyone to view

DATA ANALYTICS & VISUALIZATION TOOLS

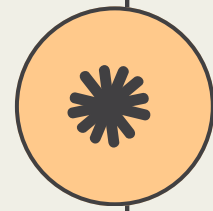


PURPOSE: Improve system transparency and enhance donor trust.

Our implementation:

- Calling API in real time to refresh data
- Dashboard displays the total amount daily donations
- Real-time rankings

CLOUD & API INTEGRATION



PURPOSE: Make the system scalable, secure, and accessible from multiple

Our implementation:

- Support cross-platform calls (Web / Mobile)

Azure Cloud

- Host AI Model API (Flask)
- Host Blockchain Functions
- Host Payment Webhook

AWS Cloud

- Host React Web Application
- Web app hosting



DEMO



THE FUTURE

AI Identity Verification

- Face Action Auth: Blink / turn head for real-time ID check
- IC Match: Prevent identity fraud by comparing ID photo & user

Auto Document Checking

- OCR scans payslips & bills
- Extracts income info to boost audit speed & accuracy

Smart AI Assistant

- Built-in LLM-RAG chatbot answers all user questions instantly
- Supports Manglish/Malay tone for better user experience

Blockchain + AI Prediction

- Use donation records and disaster data to train AI
- Prediction Which areas are more likely to need assistance in the future

Smart Donation Plans

- Set up auto monthly donations (e.g. RM100/month) for urgent cases

Revenue Model

- 3% service fee (separate from donation) to cover platform costs

