Hackathon Project Phases Template

Project Title:

AI Powered ethical decision making simulations with mistral

Team Name:

AI Crushers

Team Members:

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Phase-1: Brainstorming & Ideation

Objective:

Develop a simulation platform using Mistral's AI to model, analyze, and practice ethical decision-making in complex real-world scenarios across various domains.

Key Points:

1. Problem statement:

Ethical decision-making often involves complex, context-sensitive dilemmas where biases, lack of expertise, or inadequate frameworks lead to suboptimal or unfair outcomes.

2. Processing Solution:

Utilize Mistral's AI to dynamically generate scenarios, provide ethical analysis using established frameworks, and offer transparent, explainable recommendations tailored to diverse contexts.

3.Target User:

Policymakers, corporate leaders, educators, students, and professionals seeking to improve their ethical decision-making skills or evaluate ethical impacts in their fields.

4. Expected Outcome:

Users gain deeper understanding, improve decision-making capabilities, and foster criticalthinking, resulting in more informed, equitable, and ethical solutions in real-world applications.

Phase-2: Requirement Analysis

Objective:

To define and analyze the technical, functional, and user-centric requirements for the AI-powered ethical decision-making simulation platform, ensuring alignment with user needs, ethical considerations, and system feasibility.

Key Points:

Technical Requirements:

1. AI Integration:

Use Mistral for generating ethical scenarios and providing recommendations based on various ethical frameworks.

2. Data Management:

Cloud storage for user data and scenarios, ensuring fast real-time processing for adaptive simulations.

3. UI/UX:

Easy-to-use interface that works across different devices (PC, mobile, VR).

4. Security:

Ensure data protection with secure user login, encrypted storage, and compliance with privacy laws (e.g., GDPR).

5. Performance:

System must be scalable and quick, processing scenarios in real-time without delays.

Functional Requirements:

1. Scenario Generation:

Ai creates realistic ethical dilemmas and shows possible outcomes based on user decisions

2. Ethical Frameworks:

Offer choices based on various ethical principles like Utilitarianism or Deontology, allowing users to explore different outcomes.

3. Feedback:

Instant feedback on decisions, showing pros, cons, and how well they align with ethical standards.

4. Progress Tracking:

Track user decisions over time and provide suggestions to improve ethical thinking.

5. Collaboration (Optional):

Enable group decision-making features for multi-user scenarios.

Constraints:

1. AI Bias:

Avoid biases in decision-making and ensure fairness across scenarios.

2. Realistic Scenarios:

Balance complexity with clarity so users don't feel overwhelmed by too many details.

3. Performance Demands:

High computational needs for real-time scenario generation could slow down processing.

4. User Flexibility:

The platform should be accessible to all users, whether beginners or experts in ethics.

Challenges:

1. Interpreting Ethics:

Ethical principles can vary, making it hard to provide universally agreed-upon advice.

2. Privacy and Security:

Handling user data securely while meeting privacy regulations.

3. User Engagement:

Keeping users engaged with fresh, challenging scenarios without overwhelming them.

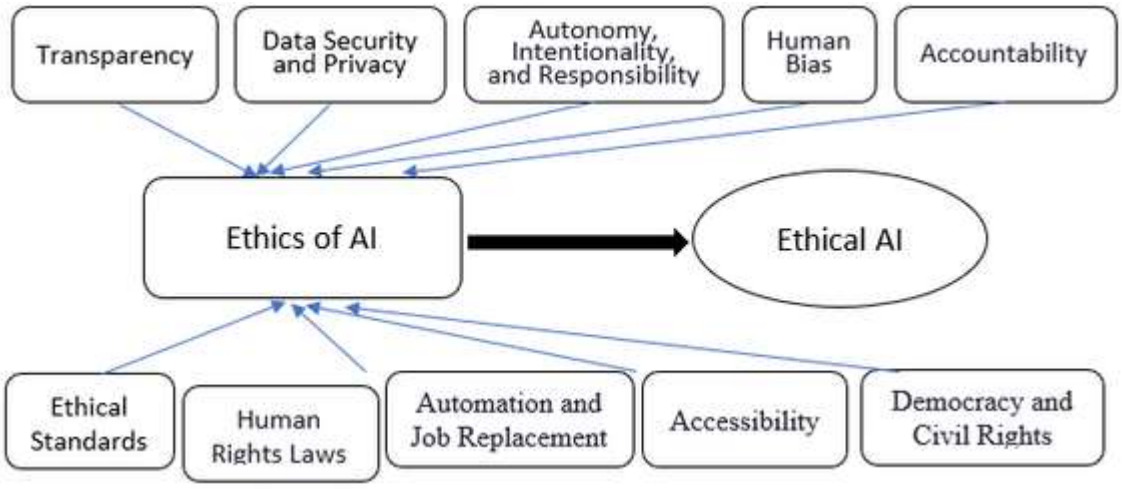
4. Cultural Sensitivity:

Creating scenarios that are universally ethical but also culturally relevant.

Phase-3: Project design

Objective:

Here's a potential design for an AI-powered ethical decision making simulation with Mistral



Key Points:

1. Users as the Central Focus:

The design starts with users who interact with the system through an intuitive and accessible user interface (UI/UX).

2. AI-Powered Core:

The AI system (Mistral) drives scenario generation, ethical analysis, and decisimaking, ensuring dynamic and context-sensitive simulations.

3. Ethical Frameworks Integration:

Scenarios are evaluated using various ethical frameworks to provide users with diverse perspectives and transparent decision reasoning.

4. Feedback and Progress Tracking:

The system delivers real-time feedback on decisions, tracks user progress, and provides insights to improve ethical understanding.

5. Backend and Infrastructure:

A robust backend integrates the AI system with a secure database for storing user data and scenarios, supported by scalable cloud infrastructure for seamless performance.

6. Modularity and Scalability

The design allows for adding new features or expanding functionalities, such as collaborative decision-making or domain-specific modules

Phase-4: Project Planning (Agile Methodologies)

Objective:

To create a comprehensive roadmap for implementing the AI-powered ethical decision-making simulation platform, detailing timelines, resources,milestones, and risk management strategies.

Key Components of Project Planning

1. Scope Definition

Develop a platform for generating and simulating ethical dilemmas across domains.

Focus on delivering core functionalities such as scenario generation, ethical frameworks, and real-time feedback.

Prioritize scalability, user engagement, and security compliance.

2. Milestones and Timeline

Month 1-2:

Requirement finalization and architecture design

Prototype development for UI/UX and basic scenario generation

Month 3-4:

AI model (Mistral) integration for advanced scenario creation.

Development of ethical framework evaluation and feedback mechanisms.

Month 5-6:

Backend implementation for database and cloud integration.

Security, privacy, and user authentication systems.

Month 7-8:

Testing and validation, including user testing for usability and performance.

Addressing bias and refining model outputs.

Month 9:

Deployment of the platform with ongoing monitoring and maintenance plans.

3. Resource Allocation

Team Requirements:

AI/ML engineers for model development and integration.

UI/UX designers for a user-friendly interface.

Backend developers for database and cloud integration.

Ethicists for framework design and validation.

Project managers for timeline adherence and task coordination.

Tools and Technology:

Cloud services (AWS, Azure) for infrastructure.

Mistral AI for scenario generation.

Development tools for frontend, backend, and testing.

4. Risk Management

AI Bias:

Conduct iterative testing to minimize bias in scenario generation.

Security Risks:

Implement encryption, regular security audits, and compliance with regulations (GDPR, CCPA).

Delays in Development:

Use agile project management to break tasks into smaller, manageable sprints.

User Adoption:

Incorporate user feedback early to ensure the platform meets expectations.

5. Deliverables

Fully functional platform with scenario generation, ethical frameworks, and progress tracking.

Documentation for users and stakeholders.

Deployment plan with maintenance schedules and support for scalability.

Phase-5: Project Development

Objective:

StreamlitBuild and implement the components of the platform, ensuring it functions seamlessly and meets user needs.

Key points:

1. Core Features Development:

Integrate the AI (Mistral) for generating ethical scenarios.

Implement ethical frameworks to evaluate decisions.

Develop a user-friendly interface for interaction.

2. Backend and Data:

Build secure systems to store user data and scenarios.

Connect frontend with AI through APIs for smooth communication.

3. Testing:

Test individual features and overall system performance.

Ensure unbiased AI outputs and smooth user experience.

4. Security and Privacy:

Add user authentication and data encryption.

Follow privacy regulations like GDPR.

5. Improvement:

Use feedback from testing to refine features.,

Plan for regular updates and improvements after launch.

Phase-6: Functional & Performance Testing

Objective:

Ensure the platform works correctly and performs efficiently under different conditions.

Key Points

1. Functional Testing:

Test scenario generation, ethical analysis, and user feedback.

Check UI navigation, user authentication, and progress tracking.

2. Performance Testing:

Verify speed, scalability, and reliability under heavy usage.

Ensure quick response times and stable performance.

3. Security Testing:

Test data protection, encryption, and user authentication.

Confirm compliance with privacy laws (e.g., GDPR).

4. Usability Testing:

Get user feedback to improve design and functionality.

5. Final Checks:

Re-test after bug fixes or updates.

Prepare a report of test results and improvements.
