OpenHouse'24

Project Name: AI Fraud Detector

{Theme: AI (Security & Fraud Detection)}

❖ Introduction

As we know, in the current scenario Artificial Intelligence (AI) is revolutionizing various industries, and one of its significant applications is in cybersecurity, specifically in detecting fraudulent activities. My project, "AI Fraud Detector," aims to develop a simple yet effective AI-based system that can analyze transactional data and identify potentially fraudulent activities, enhancing security measures and protecting financial systems from cyber threats.

❖ Project Overview:-

➢ **What the Project Is**: The AI Fraud Detector project involves creating a user-friendly app and an interactive webpage that simulate how AI can detect fraudulent transactions based on various attributes such as transaction amount, type, and time. The project includes app development, webpage creation, and basic AI logic implementation.

➢ **How It Works**:

1. **App Development:** A simple app is created using Code.org's App Lab, where users can input transaction details, and the app uses conditional logic to flag potentially fraudulent transactions.
2. **Webpage Creation:** An interactive webpage is built on CodePen.io, which explains the AI Fraud Detector project and includes a simulation of the fraud detection process.

3. **AI Logic Implementation:** The project uses a rule-based AI system where specific conditions are set to flag transactions as fraudulent. This demonstrates the basic concept of how AI can be applied in fraud detection.

➢ **How It Is Helpful**: The AI Fraud Detector can significantly reduce the risk of financial fraud by identifying suspicious activities. This system can be integrated into banking and financial institutions to monitor transactions continuously, providing an extra layer of security and protecting users' financial assets.

❖ **Benefits and Vision:-**

➢ **Advantages**:

1. **Enhanced Security:** Provides real-time monitoring and detection of fraudulent activities.
2. **Efficiency:** Automates the fraud detection process, reducing the need for manual intervention.
3. **Cost-Effective:** Prevents financial losses caused by fraud, saving money for both institutions and individuals.

➢ **Vision Behind the Project**: The vision is to create an educational tool that demonstrates the potential of AI in enhancing security measures. By leveraging simple AI concepts, we can raise awareness about the importance of cybersecurity and inspire others to explore AI applications.

❖ **Project Progress:-**

➢ **Work Done**:

1. Designed the user interface and implemented basic fraud detection logic in the app.
2. Created an interactive webpage with educational content and fraud detection simulation.

3. Developed initial visualizations to demonstrate the effectiveness of the AI logic.

➢ **Elements Still Left**:

1. Fine-tuning the app and webpage for better user experience.
2. Finding a suitable name for the app.
3. Adding more detailed visualizations and content.
4. Preparing a detailed presentation for the project.

❖ Technical Details:-

➢ **How It Is Going to Work**:

- **App:** Users input transaction details, and the app uses predefined rules to flag potentially fraudulent transactions.
- **Webpage:** The interactive webpage includes a simulation of the fraud detection process and educational content about AI and its role in cybersecurity.

➢ **Code Overview**: The project involves creating an interactive app and webpage to simulate fraud detection using basic AI concepts.

1. App Prototype (Code.org App Lab)

- **Purpose:** Demonstrate fraud detection with simple rule-based logic.

2. Webpage Prototype (CodePen.io)

- **Purpose:** Provide an interactive fraud detection simulation.

3. Rule-Based AI Logic

- **Purpose:** Illustrate the application of basic AI principles through rule-based detection.
- **Components:** Implemented rules to identify fraudulent transactions based on user-defined criteria.

❖ Results and Effectiveness:-

- ➢ **Result**: The AI Fraud Detector app and webpage have shown promising results in identifying fraudulent transactions during initial testing, providing a simple yet effective demonstration of AI in fraud detection.
- ➢ **Effectiveness**: The AI Fraud Detector is effective in real-time monitoring and detection of fraudulent activities, making it a valuable tool for educational purposes. The simplicity of the rule-based system ensures that the concept is easily understood and appreciated.

❖ Conclusion:-

In conclusion, the AI Fraud Detector project demonstrates the potential of AI in enhancing cybersecurity measures. By developing a simple and accessible app and webpage, we can significantly raise awareness about the importance of fraud detection and the role of AI in achieving it. The project not only showcases the practical applications of AI but also emphasizes the importance of continuous learning and adaptation in technology. As I continue to refine and enhance the project, I am confident that it will serve as an effective educational tool and inspire others to explore AI applications.

-x-x-x-

By: Swarnika Singh [IX-'C']