SmartDealX – Online Tender & Vendor Rating Solution

Project Synopsis

By

Kritika Dviwedi

Bachelor of Science (Computer Science)

DEPARTMENT OF COMPUTER SCIENCE

SHREE L.R TIWARI DEGREE COLLEGE OF ARTS, COMMERCE & SCIENCE

(Affiliated To University of Mumbai)

THANE, 401107

MAHARASHTRA

2024-25

1. Introduction

Project Quorum is a novel, self-contained forensic analysis platform specifically designed to solve the challenge of security analysis in air-gapped or offline environments. It functions as a portable, AI-powered "offline security operations center" that runs entirely on an analyst's workstation from a single, easy-to-deploy executable. By seamlessly integrating an embedded, high-performance analytical database and robust on-device machine learning models, Quorum provides advanced, AI-driven threat detection, deep forensic capabilities, and log analysis to environments that have zero external network connectivity or cloud access.

2. Project Category

“A web and AI-based multi-utility platform for tender and property comparison.”

3. Objective The primary objectives of Project SmartDealX

are:

1. To digitalize the entire tender handling process by shifting it from paper-based to an online platform

2. To use AI for accurate and transparent bid comparison and help in selecting the best vendor.

3. To simplify vendor participation through easy registration, online bid submission, and real-time updates.

4. To implement a vendor rating system based on past performance, reliability, and pricing.

5. To provide a mobile-responsive website so users can access tenders and notifications anytime.

6. To offer a smart property/house comparison feature that helps users compare prices and features easily.

4. System Requirements

4.1. Hardware Requirements:

- CPU: 64-bit multi-core (recommended for parallel queries).

● RAM: 8 GB min, 16 GB+ recommended for large-scale analysis.

● Storage: 1 GB for app; sufficient space for log databases.

● Peripherals: USB port (for portable deployment).

4.2. Software Requirements:

● Operating System:

Cross-platform (Windows 10/11, macOS, Linux).

● Application Stack (Bundled):

○ Frontend:

HTML5, CSS3 (Tailwind/Bootstrap), JavaScript, React.js

○ Backend: Python 3.9+.

● Key Libraries: FastAPI, DuckDB, PyOD, TensorFlow Lite, React, Tauri.

5. Scope of the Project

1. Online Tender Creation & Publishing: Organizations can create, edit, and publish tenders digitally without paperwork.

2. Vendor Registration & Bid Submission: Vendors can register, upload documents, and submit bids through the website.

3. AI-Based Bid Evaluation: The system uses AI to compare bids, detect unusual patterns, and help choose the best vendor.

4. Vendor Rating System: SmartDealX maintains vendor history and automatically generates ratings based on performance and reliability.

5. Property / House Comparison: Users can compare house prices, features, and locations using an integrated comparison module.

6. Real-Time Notifications: Vendors and admins receive instant alerts about tender updates, deadlines, and results.

7. Dashboard & Analytics: Admins get an analytics dashboard with bid data, vendor reports, and performance charts.

8. Document Management: Secure upload, storage, and handling of tender documents and vendor files.

9. Mobile Responsive Platform: The complete system works smoothly on mobile, tablet, and desktop devices.

10. Security & Access Control: Encrypted data, secure login, and role-based access for admins and vendors.

6. Expected Results

1. A complete online tender handling website that makes the entire process digital and paperless.

2. Fast and accurate AI-based bid evaluation, helping in fair and transparent vendor selection.

3. Improved vendor experience with easy registration, online bidding, and real-time updates.

4. Automatic vendor rating system that helps organizations choose reliable and high-performing vendors.

5. Secure and efficient platform with proper data protection, automated notifications, and analytics for better decision-making.