What AI says about this Idea

Yes, **your project idea is an excellent fit for the CBSE Skill Expo 2025-26**, and here's a detailed evaluation based on the circular's objectives and themes:

Alignment with Expo Themes

Your project **"AI-Powered Protein-Ligand Binding Affinity Predictor"** aligns directly with the **"Technology & Innovation"** theme under **Artificial Intelligence & Coding**. It also touches on **Health & Wellness** by applying AI to drug discovery—a domain with direct medical relevance.

Strong Match with Evaluation Criteria

Assessment Criteria (as per CBSE Circular)	**Your Project Match**
Creativity and Imagination (20%)	Innovative AI-based simulation with 3D visualization for drug prediction
Originality and Innovativeness (15%)	Integrates ML models, visual interaction, and bioinformatics—rare for school-level
Scientific Thought/ Approach (15%)	Deep computational biology grounding with literature review and methodology
Technical Skills, Workmanship (15%)	Combines Python, Streamlit, ML models, RDKit, and web development
Entrepreneurship, Scalability, Social Utility (15%)	High educational and pharmaceutical value; scope for platform scaling
Economics (Low Cost), Portability, Durability (10%)	Open-source tools, lightweight interface, and local setup possible
Presentation and Explanation (10%)	Well-documented, interactive, and designed for non-technical audiences

Educational & Career Value

The project directly supports NEP 2020 objectives:

- **Bridges CS & Biology** (interdisciplinary)
- **Hands-on ML & Bioinformatics** exposure
- Promotes **career pathways** in biotech, AI, and data science
- Encourages **peer learning** and **science communication**

Feasibility for Expo

- **Visual appeal**: 3D molecular visualizations are highly demonstrable.
- **Interactivity**: Live predictions make it engaging.
- **Defined scope**: 8–10 week roadmap with deliverables, risk mitigation, and documentation.
- **Presentation readiness**: With scenarios and a user-friendly UI, it's made for showcasing.

Suggested Enhancements (Optional but Powerful)

1. **Live demo on local machine or tablet** (low latency predictions).
2. **Use cases**: Add example drugs and target diseases (e.g., COVID-19 spike protein).
3. **Simple explainer videos**: For protein-ligand binding and how AI helps.
4. **Optional social angle**: Mention how this could accelerate affordable drug research for India.

Verdict:

Excellent idea. Strong technical foundation, educational impact, and alignment with CBSE's Skill Expo goals. You should **definitely pursue this** —it's likely to stand out both at the **regional** and **national levels**.

Would you like help preparing the visuals, video demo, or display presentation for the Expo?