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| Feature | Existing Systems | Proposed System |
| Emission Calculation | Calculates emissions based on activity inputs (e.g., fuel usage, electricity) using preset emission factors. | Provides more detailed emission breakdowns by activity type (e.g., transportation, equipment usage, methane capture) |
| Carbon Sink and Offset Analysis | Basic estimation of carbon sinks via afforestation and vegetation, with limited comparison to emissions. | Adds dynamic simulations for afforestation, allowing users to model different tree types and land areas for optimized carbon sequestration. |
| Carbon Neutrality Pathway Simulations | Includes some pathway simulations (e.g., switching to electric vehicles or renewable energy), but limited flexibility in combining strategies. | Advanced pathway simulations that allow users to combine multiple strategies (e.g., renewable energy + methane capture) and view long-term impact projections. |
| Data Visualization | Basic charts and graphs displaying historical emission trends and breakdowns by source. | Adds interactive visualizations with scenario comparisons, time-series projections, and custom reporting for user needs. |
| User-Friendly Dashboard | Provides dashboards but may lack real-time monitoring capabilities and granular data insights. | Comprehensive dashboard with live emissions tracking, real-time KPIs, and customizable views tailored for user-specific needs. |