

Task1 :- Product features and issues

Product: *EcoAir Pro Smart Air Purifier*

Purpose: Automatically detects and purifies indoor air (removes allergens, pollutants, and odors) while integrating with smart home ecosystems.

Features:

1. **Auto-Adjusting Filters:** Sensors detect PM2.5, VOCs, and humidity levels to adjust fan speed.
 2. **Wi-Fi/App Control:** Remote monitoring via smartphone app (real-time air quality data, scheduling).
 3. **Voice Integration:** Works with Alexa/Google Assistant for voice commands.
 4. **Energy Efficiency:** Sleep mode for nighttime use; claims 50% lower energy consumption.
 5. **Filter Replacement Alerts:** Notifies users via app when filters need changing.
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Observed Issues:

1. **Sensor Accuracy:** Users report false readings (e.g., detecting "poor air quality" after cooking, even with odors cleared).
 2. **App Complexity:** Overwhelming interface for non-tech users; frequent connectivity drops.
 3. **Filter Costs:** Proprietary filters are expensive and hard to recycle.
 4. **Noise Levels:** High fan speeds are disruptive, even in "quiet mode."
 5. **Lack of Customization:** Limited options for users with specific needs (e.g., pet owners, asthma sufferers).
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Summary of Ideas:

Problem Statement:

"EcoAir Pro users need a more intuitive, affordable, and customizable air purification system that balances accuracy, usability, and sustainability."

Final Concept :

A redesigned **EcoAir Pro 2.0** with:

- **AI-Powered Sensors:** Context-aware pollution detection.
- **Modular Filters:** Washable/recyclable components.
- **Simplified App:** One-touch controls and voice-guided troubleshooting.
- **Community Features:** Share air quality data with neighbors to track hyperlocal environmental trends.