

This is a really solid hackathon concept—you’re thinking end-to-end (inputs → processing → outputs + feedback loop), which judges love. The structure you sketched makes sense for a postpartum depression (PPD) detection + support system. Let me give you crisp feedback and a few upgrades that could help you win 🏆

What You’re Doing Well 🔥

**1** Inputs – Great coverage

You’ve got strong multimodal signals:

Questionnaire (EPDS-style)

Sleep / mood / heart rate (wearables = 🔥 points in hackathons)

Voice journal (huge signal for depression detection)

Health history / file upload

👉 Judges love multi-source data fusion. This shows maturity.

**2** Processing Pipeline – Very strong architecture

Your flow:

JSON → EMR format

RAG knowledge layer

Risk scoring + assessment

ICD mapping + recommended action

This is legit startup-grade thinking. Especially:

RAG knowledge layer = explainable medical grounding

Risk scoring = tangible ML output

ICD mapping = makes it clinical-grade & EMR-compatible

You're basically pitching an "AI clinical co-pilot for postpartum mental health."

### 3 Outputs – Exactly what stakeholders want

You covered all audiences:

User Output

Doctor Clinical report / EMR-ready

Patient Friendly summary

Family/Partner Alert system

System Risk score + action

This is gold for judges. It shows you understand real-world deployment.

- 1 Be VERY explicit about ethics & safety (Judges care)

Add a box:

⚠ Safety Layer

Crisis detection (self-harm language)

Escalation protocol (hotlines, clinician alert)

AI disclaimer (not a medical diagnosis)

Consent & data privacy

Judges love safety awareness in healthcare hacks.

- 2 Add EPDS as your core screening tool

Mention this explicitly:

Edinburgh Postnatal Depression Scale (EPDS)

Hackathon judges will recognize this immediately.

You can say:

Questionnaire → EPDS score → ML risk model

That makes your project medically grounded.

🟡 3 Voice Journal = big differentiator (lean into it)

Your sketch hints at this, but lean HARD into:

Voice sentiment analysis

Prosody (monotone, slowed speech)

Keyword spotting (hopeless, overwhelmed, alone)