# 🏥 NAAMII-BPEF AI in Healthcare Hackathon

✅ **Tasks**

# 🖥️ **Unified AI-Assisted Screening Dashboard Specification**

🗓️ **Hackathon Schedule**

🏆 **Judging Rubric**

## Tasks

* 🔬 **Model Development:** Build AI models for disease detection/classification.

Please use a mobilenetv3 architecture for classification, YOLOv4-tiny for object detection and tiny-UNET so that inference can be run on laptop and output is obtained in real time.

* 🖥️ **Unified Dashboard Development:** Implement features from the dashboard specification (see below).
* 🧠 **Explainability & Trust:** Generate saliency maps, ROI overlays, or interpretable confidence scores.

# 🖥️ **Unified AI-Assisted Screening Dashboard Specification**

The competition deliverables should include (where feasible) a **prototype dashboard** to demonstrate model outputs.  
 This will test not only **model performance** but also **usability for frontline health workers and clinicians**.

## 🔹 **Core Interface Features (All Tasks)**

1. **Bulk Import of Images**
   1. Upload multiple images at once (folder or zip).
   2. System processes all images and outputs predictions in a **tabular view**.
2. **Single Patient Mode**
   1. Upload or capture a single image (e.g., mobile camera/otoscope).
   2. Immediate model inference with **visual explanation** (heatmap/segmentation/bounding box).
   3. Generate a printable report
3. **Results Table View**
   1. Each row = one patient/image.
   2. Columns: Patient ID, Condition Prediction, Confidence Score, Referral Suggestion, Notes.
   3. **Sorting & Filtering:**
      1. Sort by model confidence (high → low, or vice versa).
      2. Filter by class (e.g., "only show urgent referrals").
4. **Confidence Highlighting**
   1. Color-coded rows:
      1. **Red** = urgent referral
      2. **Yellow** = uncertain/low confidence
      3. **Green** = normal/no referral
5. **Batch Report Export**
   1. Export results in CSV/PDF format for health workers or telehealth referral.
6. **Feedback Loop**
   1. Clinicians should be able to correct the AI model prediction if s/he needs to.

## 🗓️ **Hackathon Schedule (2 Weeks)**

* **Sept 2**  **Day 0** 🚀 Kickoff & Problem Statements Released (Intro session + team formation).
* **Sept 3**  **Day 1–2** 📊 Datasets Shared
* **Sept 4-6**  **Day 3–5** 🔧 Development Sprint 1 (model building, dashboard prototyping).
* **Sept 7**  **Day 6 🧑‍⚕️ Midpoint Check-in (mentorship, interim demos, feedback).**
* **Sept 8 – 10**  **Day 7–9** 💡 Development Sprint 2 (refinement, integration).
* **Sept 11**  **Day 11 🪧**Demo Rehearsal
* **Sept 12**  **Day 12** 🎤 Final Submission & Demo Day (judging + awards).

🏆 **Judging Rubric (Track-Specific)**

#### Workflow Integration (40%)

* 🎨 Usability & Design (50%)
* 💡 Innovation (20%)
* 🎤 Presentation (30%)

#### Model Development (30%)

* 📈 Baseline Model Implementation (40%)
* 🔎 Test Cases (10%)
* 🧾 Reproducibility (20%)
* 🎤 Presentation (30%)

#### Explainability (30%)

* 🔎 Baseline Interpretability (50%)
* 📱 Usability (20%)
* 🎤 Presentation (30%)