AI for Bharat Hackathon

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Team Name : Skill Sprint

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Problem Statement : Informal workers struggle to present their skills digitally. Build an AI system that converts real-world skills into digital profiles and matches workers with nearby job opportunities.

BRIEF ABOUT THE IDEA:

=› Our solution is an AI-powered Skill-to-Job Translator that converts informal, experience-based skills into structured digital profiles.

=› Using NLP and voice-based input, the system captures skills in regional languages and transforms them into standardized job-ready data.

=› Machine learning algorithms analyze skill patterns and map them to relevant job categories.

=› A location-based matching engine connects workers to nearby opportunities in real time.

=› Skill validation can be supported through peer ratings, employer feedback, and task-based micro-assessments.

=› Data analytics dashboards provide insights on skill demand, supply gaps, and employment trends.

=› This data-driven approach increases job matching accuracy, reduces hiring time

OUR SOLUTION EXPLAINS THE FOLLOWING:

Our Solution: AI-Powered Job Translator for Informal Workforce

- **How different is it from any of the other existing ideas**

= › Unlike traditional job portals, our solution does not require resumes or formal certifications — it converts real-world experience into structured digital identity using AI.

= › Instead of static listings, it uses intelligent skill mapping and geo-analytics for hyperlocal job matching.

= › Our AI-driven Skill Translation Engine transforms unrecognized talent into measurable, employable data.

- **How will it be able to solve the problem?**

= › It captures real-world skills through voice/text input and converts them into structured digital profiles using AI.

= › A smart matching engine then connects workers to relevant nearby job opportunities based on skills and location.

- **USP of the proposed solution:**

AI-powered "Skill Translation Engine" for inclusive workforce integration.

KEY FEATURES OF THE SOLUTION ARE:

⇒ AI Skill Translation Engine – Converts real-world experience into structured digital profiles.

⇒ No Resume Requirement – Builds profiles without formal documents or certifications.

⇒ Smart Skill Classification – Uses ML algorithms to map skills to relevant job categories.

⇒ Geo-Location Job Matching – Connects workers to nearby opportunities in real time.

⇒ Adaptive Learning System – Improves job recommendations based on hiring data.

⇒ Analytics Dashboard – Provides insights on skill demand, supply gaps, and employment trends.

⇒ Mobile-Friendly Interface – Designed for low-end smartphones and easy usability.

Process flow diagram or Use-case diagram.

Informal Worker
Voice / Text Skill Input (Multilingual)
AI Skill Translation Engine
(NLP + Skill Classification)
Structured Digital Profile Creation
Skill Validation & Credibility Score
Geo-Location Based Matching Engine
Nearby Job Opportunities
Employer Feedback & System Learning

Architecture diagram of the proposed solution:

USER LAYER
FRONTEND LAYER
APPLICATION / AI PROCESSING LAYER
BACKEND LAYER
DATA LAYER

Technologies to be used in the solution:

PROPOSED SOLUTION:
= › Frontend
React.js / Flutter (Cross-platform Web & Mobile App)
HTML5, CSS3, JavaScript
= › Backend
Node.js / Python (Fast API / Django)
= › AI & Machine Learning
Natural Language Processing (NLP)
Speech-to-Text (Google Speech API / OpenAI Whisper)
Skill Classification & Recommendation Algorithms
= › Database
PostgreSQL / MySQL (Structured Data)
Firebase (Real-time Updates)
= › Geo & Location Services
Google Maps API
Geo-Location & Distance Calculation APIs
= › Cloud & Deployment
AWS / Google Cloud / Azure

CONCLUSION:

Impact, Beneficiaries & Business Feasibility

=> Impact: Transforms informal skills into digital identity, increasing employment access and reducing hiring gaps.

=> Beneficiaries: Informal workers gain visibility; MSMEs and employers access verified, local talent.

=> Go-To-Market: Pilot in targeted regions through NGO, skill center, and contractor partnerships.

=> Value Proposition: AI-driven skill translation + hyperlocal job matching with credibility scoring.

=> Sustainability: Revenue through employer subscriptions, hiring commissions, and institutional partnerships.

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Thank You