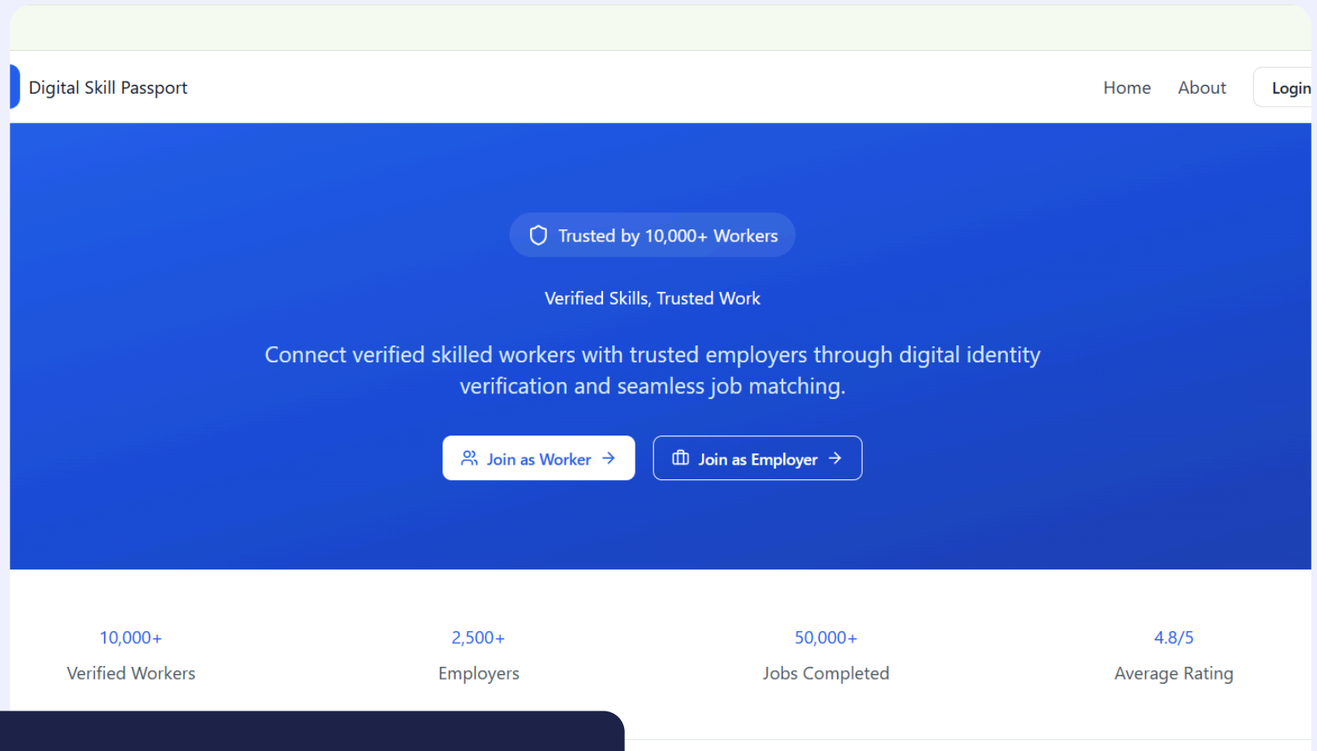
HACKX 2025

DIGITAL SKILL PASSPORT



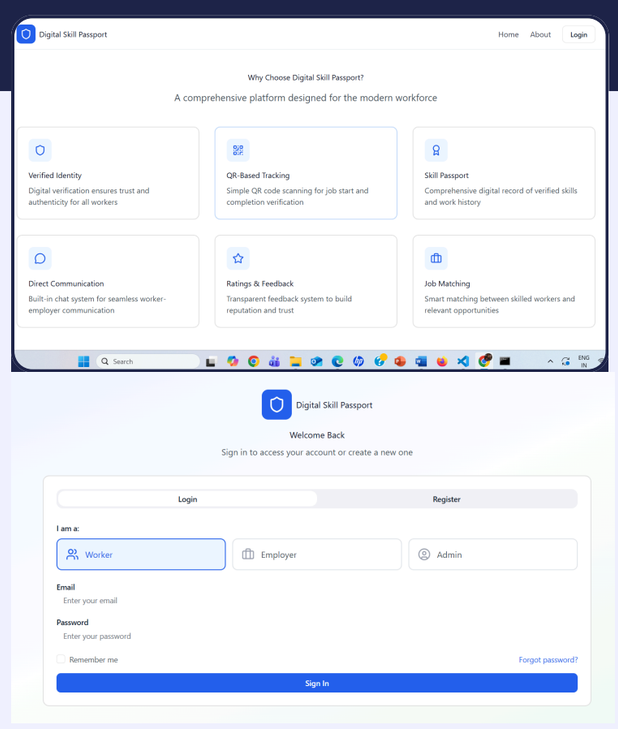
- India's blue-collar workforce over 500 million strong forms the backbone of our economy yet remains invisible in the digital ecosystem.
- Lack of verified skill identity and employment history limits their access to better opportunities, fair wages, and social mobility.
- Digital Skill Passport (DSP) is a web-based platform designed to bridge this gap by creating verified digital identities for blue-collar workers, enabling employers to access authentic skill data through QR-based verification.
- It's not just a tech solution it's a step toward restoring trust, dignity, and employability for millions.

PROBLEM STATEMENT

- Blue-collar workers often rely on verbal skill proof, leading to hiring bias and inconsistent job access.
- Companies struggle to validate worker authenticity, increasing the risk of fraud and inefficiency.
- Without digital recognition, skilled workers lose employment opportunities across regions and sectors

INNOVATION AND UNIQUENESS

- First-of-its-kind Digital Skill Identity for India's blue-collar workforce.
- Combines verification, transparency, and employment linkage in one platform.
- Designed to align with India's Skill Development and Digital India missions.



Methohdology

Step 1

Worker Registration – Workers sign up via mobile OTP and submit ID + skill credentials

Step 2

Verification Process – Admins or employers validate data through a backend dashboard using Firebase authentication.

Step 3

Skill Passport Generation – Verified users receive a QR-based digital profile, accessible anytime, anywhere.

Step 4

Employer Dashboard – Employers scan the QR code to instantly verify worker skills, feedback, and past employment

Step 5

Secure Cloud Storage – All records are encrypted and stored using Firebase Firestore, ensuring integrity and privacy.

This methodology ensures trust, speed, and scalability, making DSP adaptable for real-world deployment.

IMPLEMENTATION

The prototype was built using React.js for the frontend and Firebase for backend authentication and data storage.
A responsive UI was designed for both worker and employer portals.
Features include:

- OTP-based login and registration
- Dynamic QR code generation for verified profiles
- Real-time data synchronization with Firebase
- Modular UI for scalability (Worker | Employer | Admin views)

IMMEDIATE OUTCOMES

- Simplified onboarding and verification of workers
- Enhanced hiring trust and reduced fraudulent profiles
- Easy employer access to verified worker databases

FUTURE SCOPE

- Integration with Aadhaar-based e-KYC for government-level trust validation
- AI-driven job-matching based on verified skills
- Multilingual accessibility for inclusivity across India's diverse workforce
- Expansion into MSME and gig-economy sectors

TECHNOLOGIES USED

- Frontend: React.js (for fast and modular UI development)
- Backend: Firebase (for real-time data sync and authentication)
- Deployment: Vercel (for continuous integration and hosting)

References

- Skill India Mission – Ministry of Skill Development & Entrepreneurship
- World Bank Report (2023): "India's Labor Market & Digital Inclusion"

TEAM SYNAPSE

SHRUTI MISTRY, VIHA VYAS, ASHUTOSH BARVE, YASH MODHA