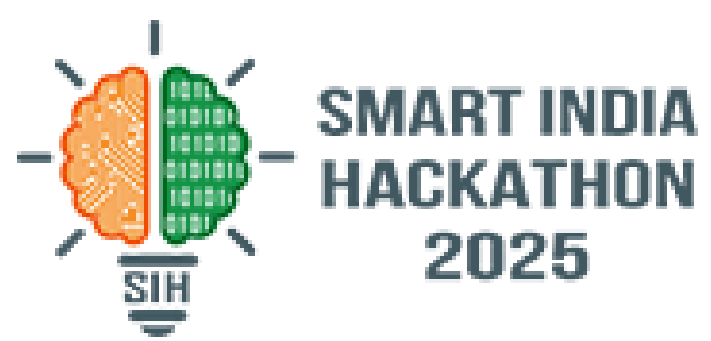


SMART INDIA HACKATHON 2025



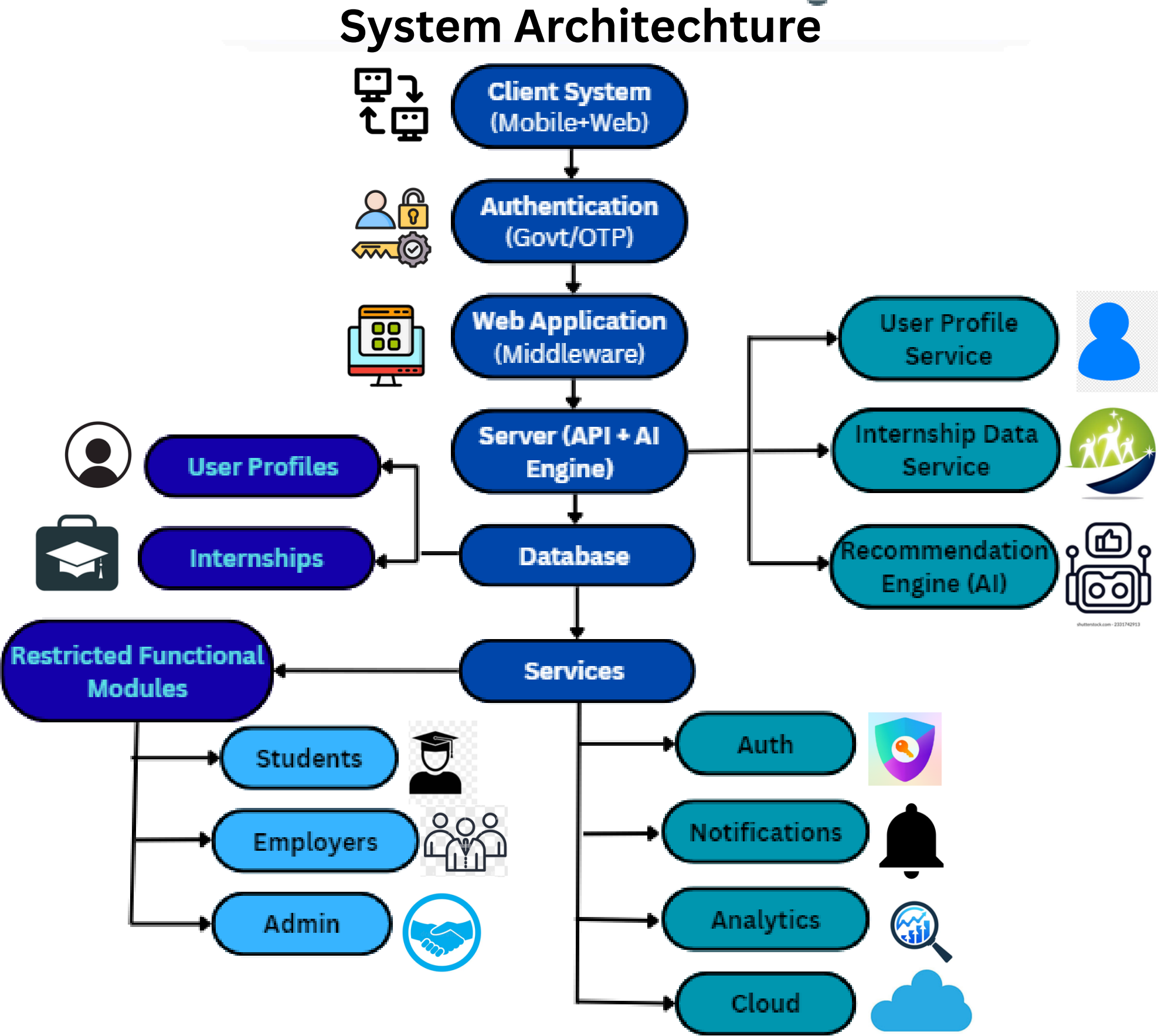
AvsarX

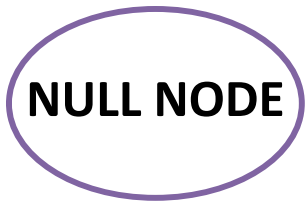
- Problem Statement ID – SIH25034
- Problem Statement Title - AI-Based Internship Recommendation Engine for PM Internship Scheme
- Theme - Smart Education
- PS Category - Software
- Team ID -
- Team Name (Registered on portal) - NULL NODE



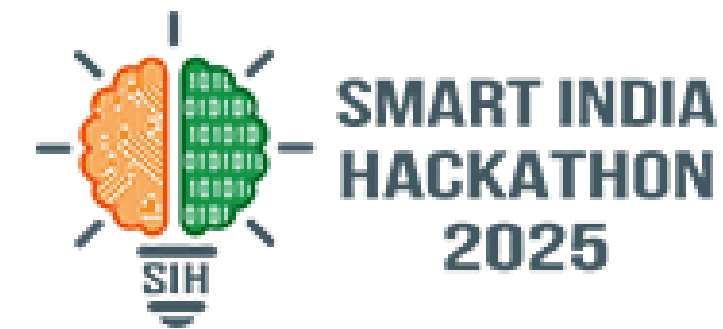
PROPOSED SOLUTION

- **Profile Creation:** Students create/upload a resume to extract a simple digital profile (skills, education, interests, preferred locations).
- **AI Matching Engine:** Matches candidate profiles with internship descriptions using **NLP + ML**.
- **Smart Filters:** Refine by location, category, or internship type.
- **Application tracking system:** Students can view applied internships and track progress/status.
- **Mobile-first lightweight design** for easy access in low-connectivity areas.
- Supports **students with low digital literacy** via resume upload and simplified guided steps.
- Reduces **application mismatches** by extracting accurate data from resumes.
- **Resume Parsing+AI Matching:** Auto-extraction of details is unique compared to manual-only portals.
- **End-to-End Process:** From **profile** → **recommendation** → **filters** → **application** → **tracking**, all in one system.
- Email notifications to every user for easy access and reminders.





TECHNICAL APPROACH



TECHNOLOGY STACK

Frontend: HTML, Tailwind CSS, Vanilla JS, JQuery, Bootstrap, Flexbox

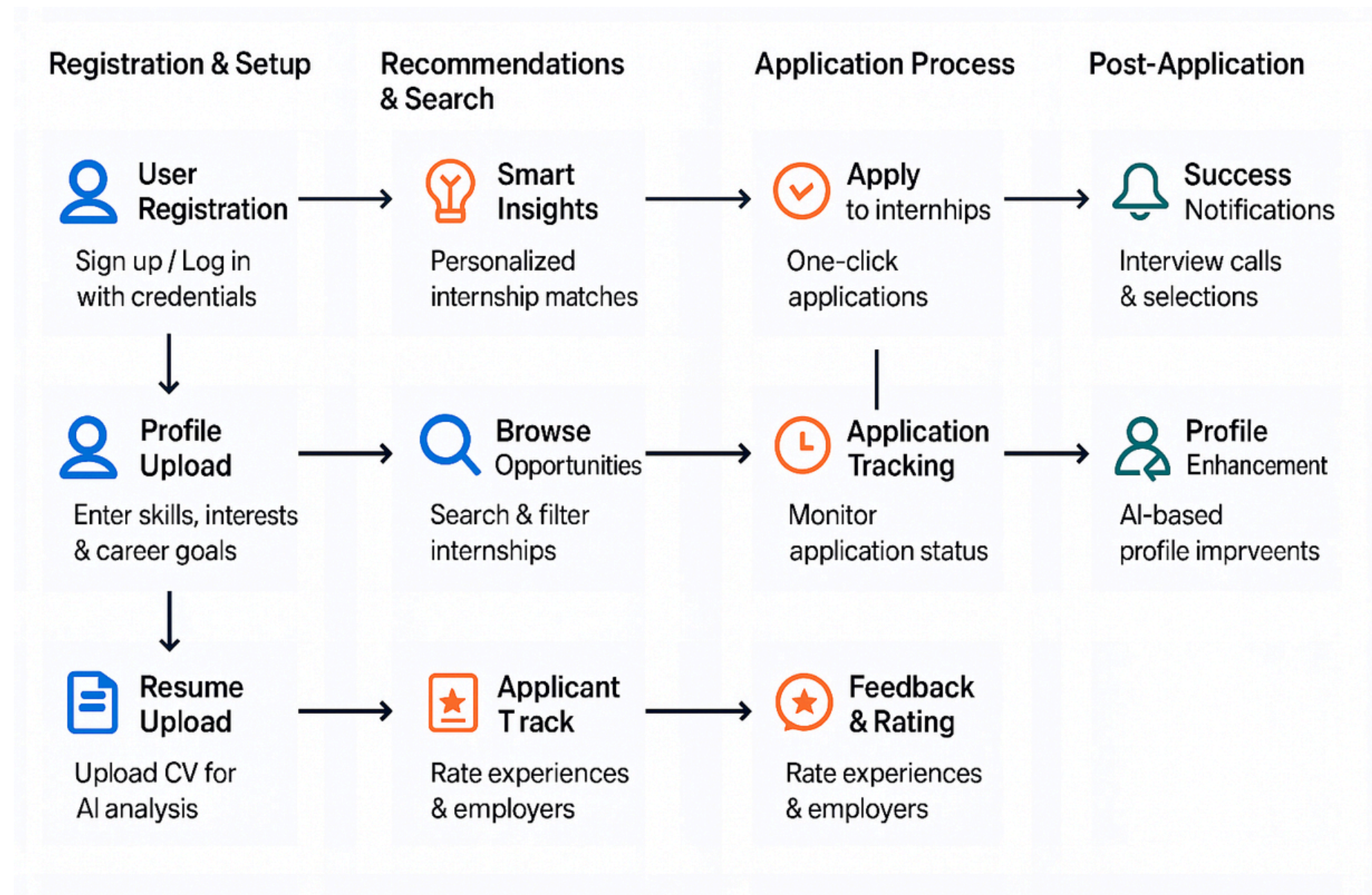
Backend: Flask (Python)

Data: Scraped from PM Internship Website

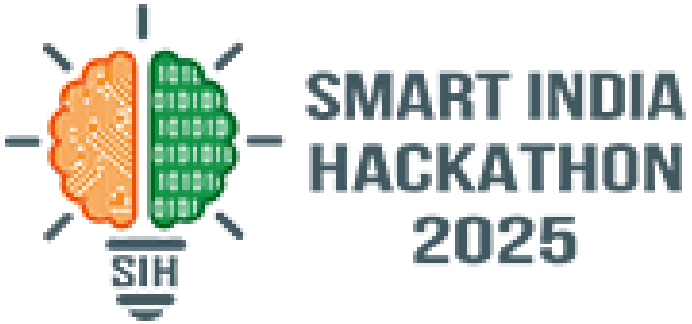
ML model: TensorFlow (Model development), Scikit-learn (Preprocessing and evaluation), Hugging Face Transformers (NLP for resume parsing).

Database: Postgre SQL

Authentication: OAuth2.0, Firebase



FEASIBILITY AND VIABILITY



Feasibility:

- The AI recommender concept is feasible, leveraging existing machine learning algorithms and data science techniques.
- Data can be collected from user profiles, preferences, behaviors, and historical data to train models.
- Technologies such as collaborative filtering, content-based filtering, or hybrid recommendation systems can be used depending on the use case.



Potential Challenges and Risks:

- Data quality and availability: Poor or insufficient data can affect model performance.
- Privacy and ethical concerns: Handling sensitive or personal data must comply with regulations.
- Scalability: Handling large user bases and data volumes can challenge system performance.



Strategies to Overcome Challenges:

- Ensure data cleaning, preprocessing, and augmentation to improve data quality.
- Implement strong privacy protections, anonymization, and transparent data-use policies.
- Regularly audit algorithms for bias; use techniques like fairness-aware machine learning.
- Architect scalable systems using cloud services, efficient algorithms, and caching.



Unique Selling Proposition:

- Personalized Matching: Using advanced AI algorithms to understand individual preferences and behavior for tailored recommendations.
- Adaptive Learning: Continuously improving recommendation accuracy by learning from user interactions and feedback.
- Scalability: Supporting a large number of users efficiently with fast, real-time recommendation generation.

Restricted functional Module



Youth

Profile Setup

Personalized
Recommendations



Employers

Internship Posting

Recommended
Candidates



Admin

Monitor AI Recommen-
dations

Manage Data Quality

Services



Auth
Service



Cloud
Hosting

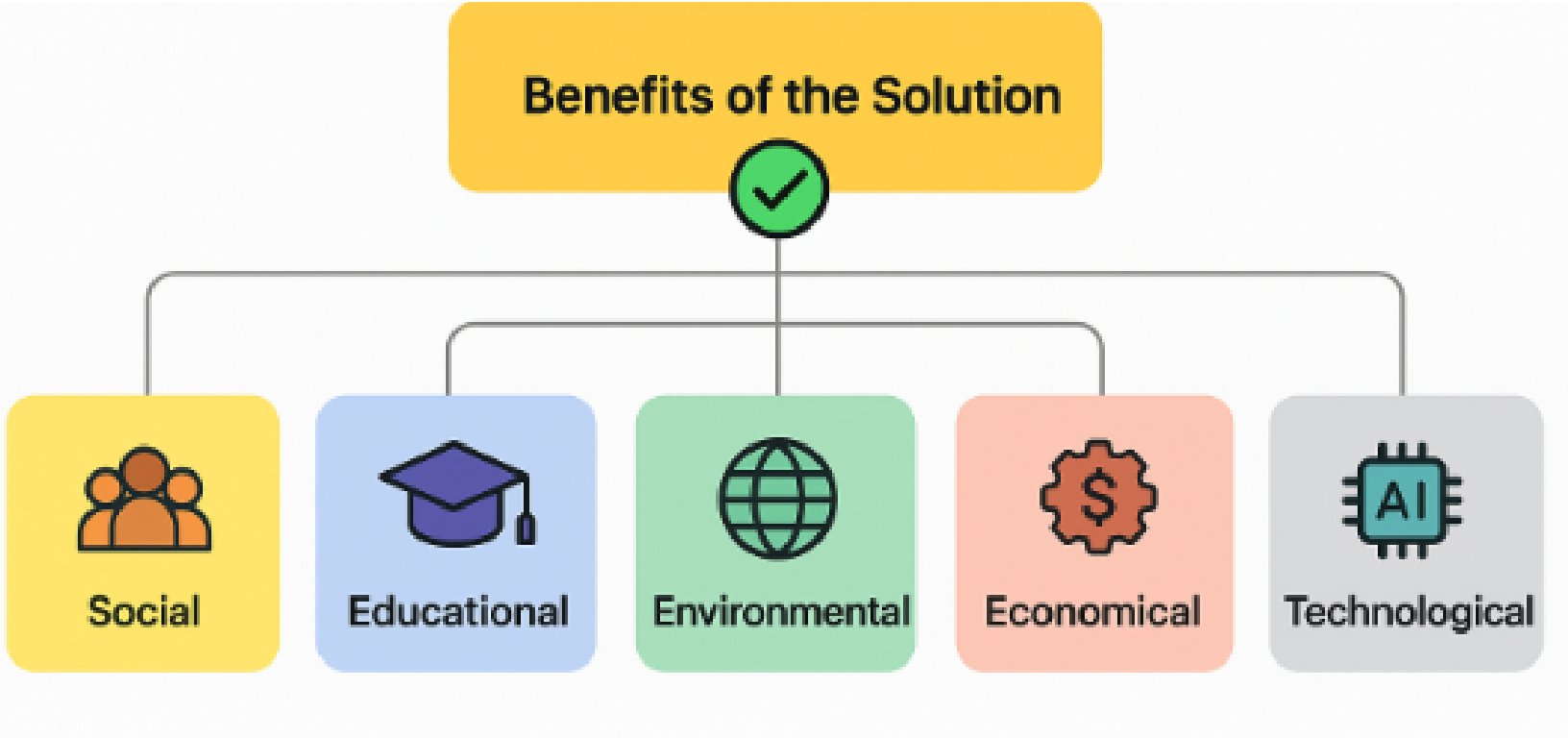


Email/s
Service



Analytics

IMPACT AND BENEFITS



BENEFITS OF THE SOLUTION:-

SOCIAL BENEFITS:-

- Connects students with companies and professionals fostering community growth.
- Helps students from **diverse backgrounds** find internships .
- Encourages continuous learning by matching candidates with internships .

ECONOMIC BENEFITS:-

- Helps companies find better-suited interns.
- **Saves time** and resources in the internship search and recruitment process.
- It can boost the chances of full-time employment after internships.

ENVIRONMENTAL BENEFITS:-

- It **lowers carbon emissions** from travel.
- **Minimizes paper use** and physical resources.

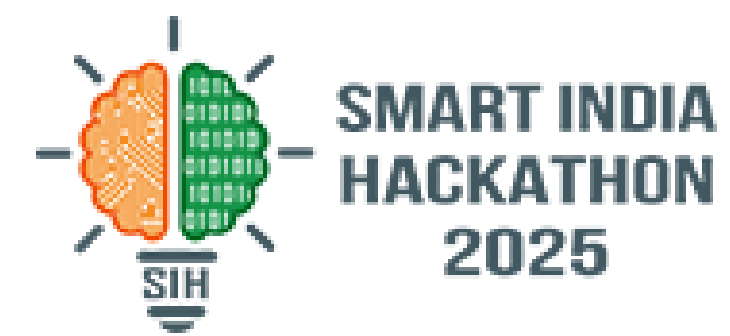
TECHNOLOGICAL BENEFITS:-

- Uses machine learning algorithms to analyze candidate profiles and preferences.
- Ensures smooth user experience on smartphones.
- Includes **audio prompts** and multilingual support for broader accessibility.

POTENTIAL IMPACT ON TARGET AUDIENCE:-

- **Improved Internship Matching** - AI recommends internships that truly fit candidates' skills, interests, and preferences.
- **Increased Access:-** Supports multilingual, audio, and simplified interfaces, making internships accessible to all.

RESEARCH AND REFERENCES



REFERENCES:-

- **Internshala** :- <https://internshala.com>
- **Naukari** :- <https://www.naukri.com>
- **LetsIntern** :- <https://www.letsintern.com>



RESEARCH:-

- [Integrating Intelligent Web Scraping Techniques in Internship Management Systems Enhancing Internship Matching](#)
- [Integrating Intelligent Web Scraping Techniques in Internship Management Systems Enhancing Internship Matching](#)



LIVE DEMO:- <https://avsarx.pythonanywhere.com/>

