

SMART INDIA HACKATHON 2025



TITLE PAGE

- **Problem Statement ID** – SIH 25033
- **Problem Statement** – AI-Based Smart Allocation Engine for PM Internship Scheme
- **Theme**- Smart Automation
- **PS Category**- Software
- **Team ID**- GID 185
- **Team Name**- CodeMatrix

TEAM MEMBERS:

1. Shikhar Mishra- 2nd Year(CSDS)
2. Pradeep Saha- 2nd Year(CSDS)
3. Shobha Kumari- 2nd Year(CSDS)
4. Shivankar Tiwari- 2nd Year(CSDS)
5. Ayush Chandra- 2nd Year(CSE)
6. Navya Luthra- 2nd Year(CSE)

IDEA / SOLUTION :

Create an AI-based platform that matches interns with roles using skills, interests, and availability. It ensures fair selection, minimizes manual work, enhances transparency, and improves efficiency in the PM Internship program

- ❖ **Smart Matching:** AI connects interns to roles based on skills and interests for the best fit.
- ❖ **Automation:** Simplifies the process by reducing paperwork and manual tasks.
- ❖ **Transparency:** Data-backed decisions ensure fairness and clarity.
- ❖ **Better Opportunities:** Helps students easily find roles that match their abilities.
- ❖ **Scalable & Fast:** Handles many applications quickly without errors or delays

Problem Resolution :

- ❖ Reduce human errors, bias, and unfair selections by using data-driven decisions
- ❖ Save time, speed up processes, and ensure smooth, transparent internship allocations for all stakeholders.

Unique Value Propositions (UVP) :

- ❖ **Fairness:** Match candidates according to their skills, not favoritism
- ❖ **Efficiency:** Automates the entire allocation process, saving time and effort
- ❖ **Scalability:** Can handle large numbers of applications without errors or delays

INTRODUCTORY PAGE



Logo

AI-Based Smart Allocation Engine

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Welcome to the AI-Based Smart Allocation Engine

The AI-Based Smart Allocation Engine for the PM Internship Scheme efficiently matches students with internship opportunities under the Prime Minister's initiative. Using advanced AI algorithms, it ensures fair, transparent, and optimized placements while fostering skill development and career growth.

Registration open for 2025 Internship Cycle! | Last date to apply: 30th Sept 2025 | Check your application status online!

[Student
Registration/Login](#)

[Company
Registration/Login](#)

[Admin
Registration/Login](#)

[Internship Schemes](#)

Latest Updates

- AI Engine Version 2.0 launched with improved allocation algorithms.
- New companies registered for the internship program this year.
- Deadline extension: Apply before 30th September 2025.

Smart Matching

Automatically analyzes candidate profiles, skills, and preferences for optimal placement.

Transparent Process

Ensures fair allocation of internships with minimal manual intervention.

Efficient & Fast

Reduces processing time and errors compared to traditional allocation methods.

Career Growth

Helps students find opportunities aligned with their abilities and interests.

Contact & Support

For inquiries, email us at support@aiallocation.gov.in

PROCESS FLOW ARCHITECTURE

Algorithm Development:

ML: To match skills

NLP: To process data

Python & Scikit-learn: For analysis of data and ranking candidates

Cloud – scale easily

APIs – connect systems

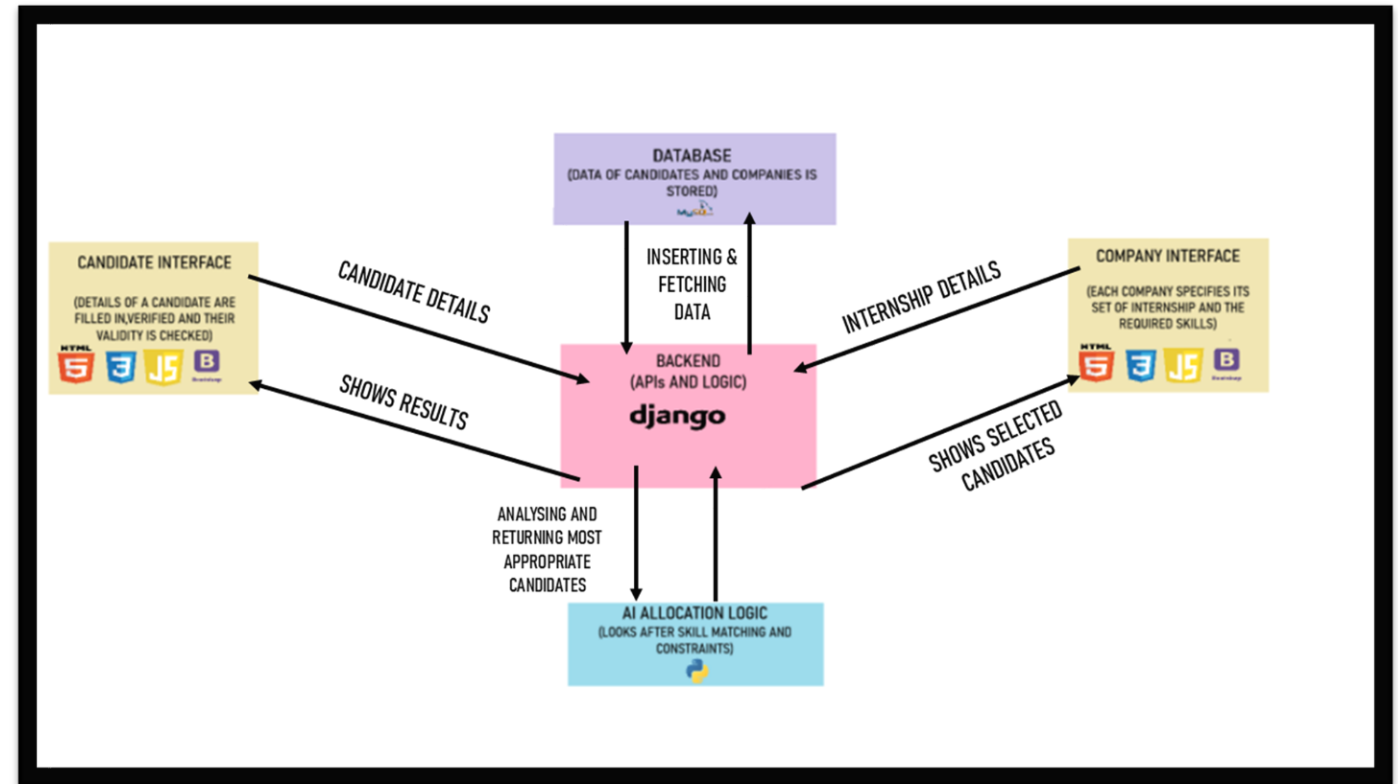
Encryption and Security:

AES & RSA: Used for encrypting sensitive data and ensuring secure communication.

Cloud Services:

MySQL - Relational database management

PHP - High responsive Rest APIs



Product Status

Frontend and backend completed; Database schema designed. We are advancing the development of AI engine ; System integration has been scheduled next.

MATCHING ALGORITHM

- **Fetch description** from candidates profile and internship portal
- **Pre process text** (remove all unnecessary characters/stop words)
- **Lemmatize the text**
- Convert the text into **embedding vectors** (using open source embedding models)
- **Cluster the embeddings** and find similarity using cosine distance/dot product

FEASIBILITY AND VIABILITY

❑ Feasibility:

Technical: Tech availability & scalability.

Financial: Costs vs ROI

Market: Demand & competition

Operational: Resources and process readiness

❑ Challenges and Risks:

Technical: System/integration issues

Financial: Budget/ROI risks

Market: Low adoption, competition

Operational: Resource/process bottlenecks.

❑ Overcoming Strategies:

Methods: Agile & testing

Principle: Focus on scalability & efficiency

Strategies: Cost control & marketing

Algorithms: Encryption & AI optimization

IMPACT AND BENEFITS

1. Efficiency and costs:

Enhances satisfaction through smooth, reliable, and easy interactions.

2. User Experience:

Enhances satisfaction through smooth, reliable, and easy interactions.

3. Security & Reliability:

Protects data and ensures consistent operations.

4. Decision Making & Competitiveness:

Enables smart choices and strengthens market position.

5. Innovation & Risk Reduction:

Encourages growth while minimizing errors and operational challenges.