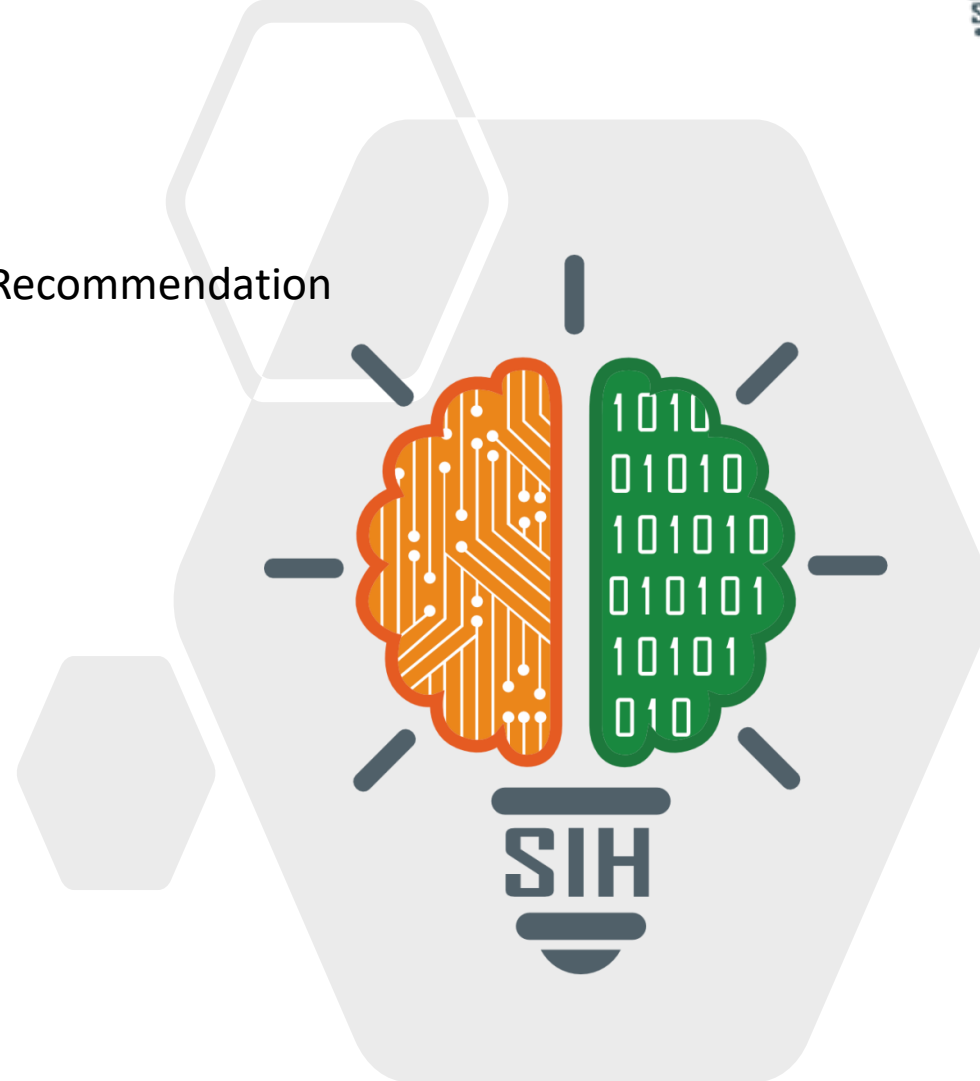# SMART INDIA HACKATHON 2025

- **Problem Statement ID-** 25034

- **Problem Statement Title-** AI-Based Internship Recommendation Engine for PM Internship Scheme.

- **Theme-** Smart Education, Internship

- **PS Category-** Software

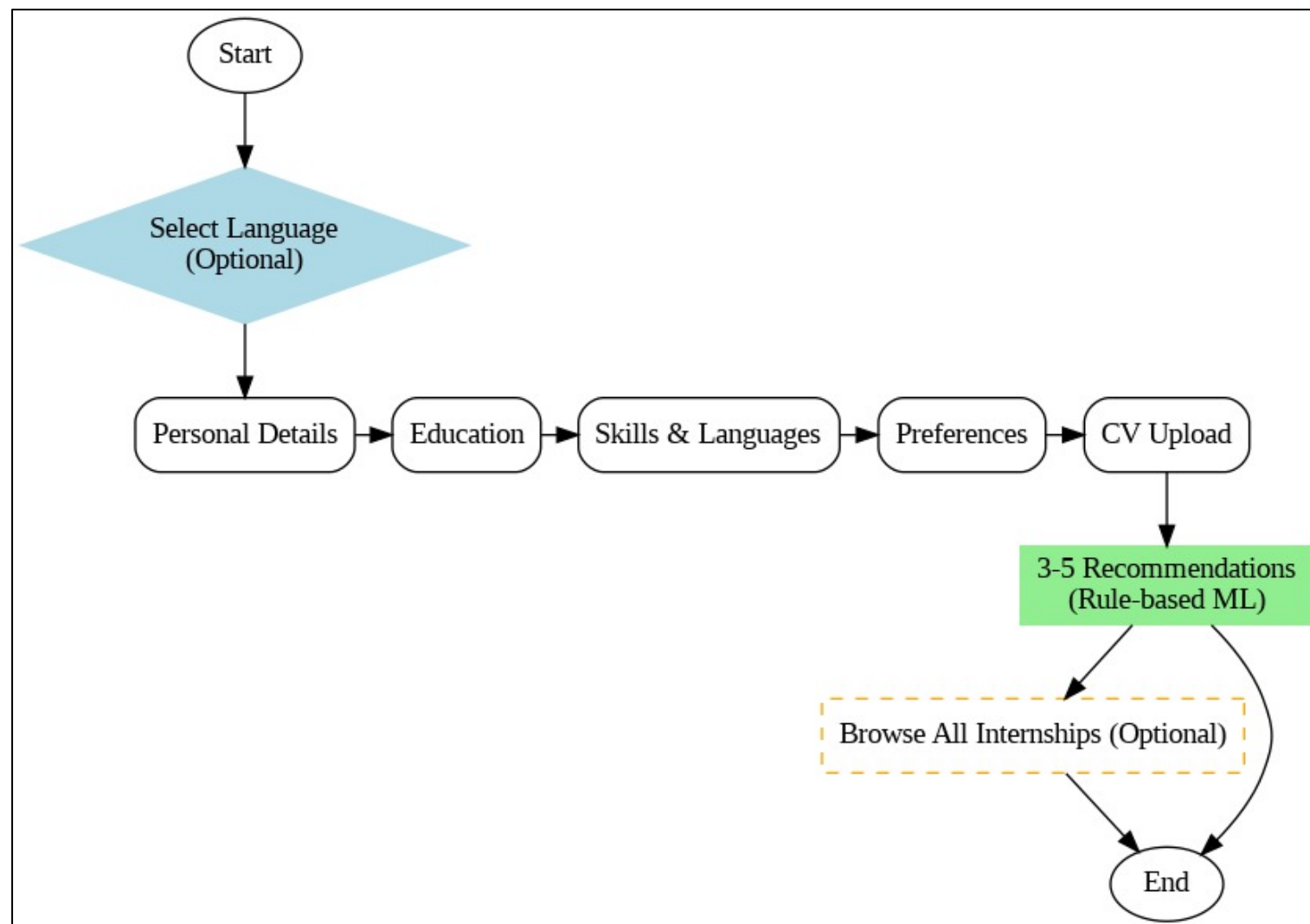- **Team ID-**

- **Team Name-** Femmetrons

PROPOSED SOLUTION

- A simple web interface for candidates to access top 3–5 personalized internship recommendations instead of browsing hundreds of listings.
- Lightweight AI/ML-based recommendation model that matches internships with candidates based on education, skills, interests, and preferred location.
- Current systems only list opportunities; they do not filter or personalize. Our solution addresses this gap by providing guided, candidate-specific suggestions.
- Unlike traditional search filters that overwhelm users, the system uses a rule-based + ML-light hybrid model to ensure quick and resource-efficient recommendations.
- The design focuses on inclusivity and accessibility: regional language support, icon/visual-based navigation for users with low digital literacy.
- By bridging the digital divide, it empowers rural and first-generation learners with direct, equal access to opportunities and guidance.
- Overall, the system strengthens the internship ecosystem by reducing mismatches, promoting inclusivity, and enhancing workforce readiness for the nation.

TECHNICAL APPROACH

Technology Stack:

- **Webpage:** React.js, TailwindCSS
- **Database management:** MongoDB
- **Analytics:** Internship filtering, similarity scoring
- **Prediction Model:** Python, scikit-learn (TfidfVectorizer + NearestNeighbors)
- **Deployment:** Flask (REST API), Integrated with Node.js/Express for MERN backend

FEASIBILITY AND VIABILITY

Feasibility
- <u>Data Availability</u>: Candidate details (education, skills, location) already exist in applications.
- <u>Tech Readiness</u>: Lightweight AI/ML and rule-based models are easy to deploy.
- <u>Alignment & Support</u>: Fits into PM Internship Scheme with strong government backing.

Potential Challenges and Risks
- <u>Data Gaps</u>: Incomplete or inaccurate profiles affect accuracy.
- <u>Communication Barriers</u>: Low digital literacy and language issues.
- <u>Scalability & Integration</u>: High user load and smooth portal integration.

Solutions / Strategies
- <u>Standardized Inputs</u>: Guided forms and predefined fields.
- <u>Inclusive Design</u>: Multilingual support, icons.
- <u>Scalable & Fair Model</u>: Lightweight backend with audits to ensure fairness.

IMPACT AND BENEFITS

- **Students/Youth:** Personalized guidance, higher selection chances, confidence boost for first-time applicants.

- **Government:** Efficient portal usage, inclusive reach, better utilization of internships.

- **Institutions/Organizations:** Receive relevant applications, reduced screening effort, improved outcomes.

- **Communities:** Encourages participation of first-generation learners, promotes financial independence.

- **Nation:** Bridges digital divide, strengthens workforce readiness, supports social and economic upliftment.

Femmetrons

Prime Minister Internship Scheme-
https://pminternship.mca.gov.in/login/