A. Job Requisition & Posting

- ◆ **Submodules:**

- **Job Request Creation** (by managers)
- **Approval Workflow** (multi-level)
- **AI-driven Job Description Generator** (using NLP & templates)
- **Multi-Channel Posting** (LinkedIn, Naukri, Indeed, internal portal)

- ◆ **AI Use:**

- Suggest required skills based on past hires.
- Predict candidate availability & hiring timelines.

B. Resume Screening & Matching

- ◆ **Submodules:**

- **Resume Parsing** (NLP extraction: skills, experience, education)
- **Candidate Ranking** (ML scoring system)
- **Duplicate/Spam Detection**
- **Skill-Gap Analysis**

- ◆ **AI Use:**

- Embedding models (BERT/Word2Vec) for semantic resume-job matching.
- Diversity & bias-checking in selection.

C. Candidate Assessment

- ◆ **Submodules:**

- **Online Tests** (MCQs, Coding, Aptitude)
- **AI Proctoring** (face recognition, cheat detection)
- **Video Interview Analysis** (tone, sentiment, keywords)
- **Predictive Scoring** (probability of success based on historical hires)

- ◆ **AI Use:**

- Computer Vision + NLP for interview performance.
- Adaptive testing engine (adjusts difficulty dynamically).

D. Interview Scheduling

- ◆ **Submodules:**

- **Calendar Integration** (Google/Outlook APIs)
- **Interview Panel Selection** (availability, role match)
- **AI-powered Scheduling Assistant** (finds optimal time slots)
- **Notifications & Reminders** (email, SMS, app alerts)

- ◆ **AI Use:**

- Predict no-show probability.
- Auto-reschedule suggestions.

E. Offer & Onboarding

- ◆ **Submodules:**

- **Offer Letter Generation** (auto-filled templates)
- **Salary Benchmarking** (AI comparison with market data)
- **Digital Signature & Approval**
- **Onboarding Workflow** (documents, training, compliance)

- ◆ **AI Use:**

- Predict offer acceptance rate.
- Personalized onboarding roadmap.

F. Internal Mobility & Succession Planning

- ◆ **Submodules:**

- **Employee Skill Mapping** (using performance + learning data)
- **AI Career Path Recommendation**
- **Internal Job Board**
- **Succession Pipeline** (identify future leaders)

- ◆ **AI Use:**

- Predict attrition risk.
- Suggest employees for promotion based on performance data.

3. Databases & Storage

- **SQL DB (PostgreSQL/MySQL):** Employee records, job requisitions, interview logs.
- **NoSQL DB (MongoDB/ElasticSearch):** Resumes, unstructured candidate profiles.
- **Vector DB (Pinecone/FAISS):** AI embeddings for resume-job matching.
- **Blob Storage (AWS S3/Google Cloud):** Resume PDFs, video interviews, documents.

4. AI Models

- **NLP:** Resume parsing, job description generation, semantic search.
- **ML Models:** Candidate scoring, offer acceptance prediction, attrition prediction.
- **CV Models:** Video interview analysis, proctoring.
- **Recommendation Engine:** Internal mobility, career growth suggestions.

5. Security & Compliance

- **Role-based Access Control** (HR/Admin/Manager/Candidate).
- **Data encryption** (GDPR, HIPAA compliance).
- **Audit trails for hiring decisions** (avoid AI bias).