Legal Compass AI — Hackathon Presentation Guide

1) Title Slide (10–15s)

- **Project:** Legal Compass AI (AI ML)
- **Tagline:** "Accurate, bilingual legal insights with verifiable citations."
- **Team & Event:** Team name, hackathon name, date

Talk track:

- "We built Legal Compass AI, a retrieval-augmented legal assistant for Indian statutes, judgments, and regulations with verifiable citations."

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2) Problem Statement (20–30s)

- Legal research is **time-consuming**, **language-limited**, and **hard to verify**.
- Lawyers, students, and citizens need **accurate, contextual, and source-linked** answers.

Talk track:

- "Even basic legal queries require scanning multiple statutes and judgments across English and Hindi."

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3) Solution Overview (20–30s)

- **RAG system** for Indian penal and regulatory statutes.
- **Bilingual querying** (English & Hindi).
- **Verifiable citations** to official sources.
- **Judgment cross-referencing** from Supreme/High Court databases.

Talk track:

- "We combine retrieval, cross-lingual mapping, and grounded generation for reliable responses."

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4) Key Features (40–60s)

- **Bilingual statutory querying** (IPC ↔ BNS mapping).
- **Automated case law cross-referencing** (relevant judgments).
- **Interactive clause comparison** (IPC vs BNS).
- **Multi-domain regulatory filtering** (IT, corporate, environmental).
- **Verifiable source footnoting** (clickable citations).
- **Legal document summarization** (orders, judgments).

Talk track:

- "Every statement is traceable, and users can drill down to original statute text."

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5) Architecture (45–60s)

- **Frontend:** Vite + React + Tailwind
- **Backend:** Python RAG service (vector retrieval + LLM)
- **Data:** Statute datasets, judgments, regulatory domains
- **Storage:** Vector DB (Chroma)

Talk track (simple):

- "User query → language normalization → vector retrieval → grounded answer + citations."

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6) Data & Pipeline (30–45s)

- Statutory corpora: IPC, BNS, IT, corporate, environmental acts.
- Judgment corpus: Supreme Court & High Court judgments by year.
- Pre-processing: cleaning, chunking, metadata tagging.

Talk track:

- "We normalize statutes and judgments into searchable chunks with section metadata."

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7) Demo Flow (60–90s)

1. **Ask a query in English** (e.g., “penalty for theft”).
2. **Ask the same in Hindi** (cross-lingual mapping).
3. **Open citation** for statute reference.
4. **Show clause comparison** IPC vs BNS.
5. **Summarize a judgment** or long order.

Talk track:

- “We demonstrate bilingual parity and traceability for every response.”

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8) Evaluation & Accuracy (20–30s)

- Retrieval relevance checks (manual sampling).
- Hallucination guardrails via citations and top-k filtering.
- Continuous improvement with dataset expansion.

Talk track:

- “Our system only answers when it can ground responses in retrieved sources.”

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9) Impact & Users (20–30s)

- Legal professionals, students, citizens.
- Reduces research time and increases access.
- Supports India’s legal modernization via BNS transition.

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10) Roadmap (15–25s)

- Add more regional languages.
- Expand databases to tribunals and regulations.
- Integrate OCR for scanned judgments.
- Enterprise deployment with audit logs.

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11) Closing (10–15s)

- “Legal Compass AI makes Indian legal research faster, bilingual, and verifiable.”
- Thank the panel and open for questions.

Slide Checklist

- Clear title + tagline
- Problem → solution → demo → impact
- Simple architecture diagram
- 3–5 key metrics/claims
- Strong demo narrative

Backup Slides

- Dataset sources list
- Failure cases & limitations
- Security & privacy notes