

# AI+ Legal Agent (2 Days)

## Program Detailed Curriculum

### Executive Summary

The AI+ Legal Agent Certification is designed for legal professionals, technologists, and AI enthusiasts aiming to build autonomous legal AI agents. This course goes beyond theoretical AI use in law by enabling participants to design, develop, and deploy AI agents for eDiscovery, contract review, legal research, compliance monitoring, case prediction, and IP filing. Through practical exercises, prompt engineering, and real-world case simulations, learners will gain the skills to construct intelligent agents that transform legal operations with precision and efficiency.

### Course Prerequisites

- Basic understanding of legal workflows or law-related contexts
- Interest in automation, AI, or legal innovation
- No prior coding experience required (coding templates provided)
- Familiarity with digital tools (e.g., spreadsheets, cloud platforms) is helpful but not mandatory or law-related contexts
- Interest in automation, AI, or legal innovation

#### Module 1

### Introduction to LegalTech and AI Agents

#### 1.1 AI Basics

- **From Tools That Support to Systems That Think:** Explore how AI agents transform legal practice by shifting from manual, precedent-driven workflows to autonomous, intelligent systems enhancing efficiency and decision-making.
- **What's So Different About AI Agents:** Understand the evolution from traditional LegalTech tools to autonomous AI agents that interpret goals, act independently, and collaborate with legal professionals.
- **What Does This Mean for Legal Teams:** Examine how AI agents reduce routine workload, improve consistency, and augment legal teams with cognitive delegation and workflow adaptation.
- **A Tectonic Shift, Not Just an Upgrade:** Analyze the fundamental impact of AI agents on legal responsibility, task delegation, and ethical challenges reshaping the profession.

## 1.2 What is LegalTech?

- **What Is Artificial Intelligence:** Introduce AI basics as the simulation of human intelligence enabling machines to perceive, learn, decide, and act dynamically.
  - **Types of Artificial Intelligence:** Differentiate Narrow AI, General AI, and Generative AI, focusing on their legal applications and current technological status.
- 

## 1.3 A Brief History of AI

- **Core Subfields of AI:** Explore AI subfields like Machine Learning, NLP, Computer Vision, Expert Systems, and Generative AI in legal contexts.
  - **AI in Everyday Life (Legal & Beyond):** Relate AI's pervasive role in daily life and its direct impact on legal research, document review, and client services.
- 

## 1.4 Why AI in Law?

- **Current Landscape of AI in Law:** Survey AI's integration across legal research, document review, predictive analytics, contract analysis, compliance, and client interaction.
  - **Evolution from LegalTech to AI Agents:** Chart the timeline from digitization and indexing to machine learning and autonomous AI legal agents.
- 

## 1.5 Emerging Trends in Legal AI Agents and the Rise of Intelligent Automation

Explore trends like autonomous agents, intelligent automation, explainability, agent collaboration, and domain-specific AI legal systems.

---

## 1.6 Case Study: Revolutionizing Legal Drafting: Allen & Overy's Integration of Harvey AI

Examine how Allen & Overy improved drafting efficiency, accuracy, and global reach by integrating Harvey AI into workflows firm-wide.

---

## 1.7 Case Study: AI-Powered Contract Review in a Multinational Legal Department:

Review how intelligent automation cut review time, increased accuracy, reduced burnout, and ensured jurisdictional compliance in contract management.

---

## Module 2

## What is an AI Agent?

---

### 2.1 AI Agents in the Legal Field

- **Why AI Agents Represent the Next Leap in Legal Innovation:** AI agents boost legal efficiency, scalability, and consistency by autonomously handling complex tasks, enabling faster, smarter decisions and transforming traditional LegalTech into adaptive, intelligent systems.
-

## 2.2 Defining Characteristics of an AI Agent

AI agents perceive, reason, decide, and act autonomously. Their core traits enable adaptive learning, goal orientation, and continuous improvement, making them powerful in complex, dynamic legal workflows.

---

## 2.3 How AI Agents Differ from AI Tools

Unlike single-task AI tools, AI agents perform multi-step, goal-driven tasks with reasoning and memory. They operate semi-independently, offering deeper context-awareness and adaptive legal decision-making.

---

## 2.4. Types of AI Agents (High-Level Functional Overview)

AI agents include task-focused, conversational, and goal-driven types. Each serves distinct legal roles, from specialized clause scoring to interactive client engagement and complex multi-step legal objectives.

---

## 2.5 Types of AI Agents (Design Architecture-Based)

Agents vary by architecture: simple reflex, model-based reflex, goal-based, utility-based, and learning agents. Complexity and memory increase from reactive to adaptive, enabling nuanced legal analysis and decision-making.

---

## 2.6 Case Study

Lexora Legal LLP implemented a hybrid AI agent system to automate contracts, intake, and compliance. This modular approach improved efficiency, accuracy, and legal team productivity by assigning tasks to optimal agent types.

---

## 2.7 Tools and Libraries for AI Agent Development in LegalTech

Key tools—LangChain, OpenAI APIs, and AgentOps—enable building, powering, and governing AI agents. They support workflow orchestration, language intelligence, and safe, auditable agent deployment in legal environments.

---

## 2.8 Legal AI Agents in Trend

Leading AI legal agents like Harvey AI and DoNotPay revolutionize research, drafting, and consumer access. These systems combine agent types to deliver smarter, faster, and more accessible legal services worldwide.

## Module 3

## GPT and NLP Foundation for Legal Agents

---

### 3.1. Introduction to NLP in AI Agents

- **What is Natural Language Processing:** NLP involves techniques for machines to parse, tokenize, tag, and analyze text, turning unstructured legal language into structured, actionable data for AI-powered legal applications.
- **The Role of NLP in AI Agents:** NLP empowers AI agents to comprehend intent, manage conversations, retrieve relevant legal info, and personalize responses, enhancing the usability and effectiveness of legal AI tools.
- **Industry Application at Rapid Innovation:** Rapid Innovation integrates NLP into legal AI systems, improving client engagement and efficiency by automating multilingual legal support, sentiment analysis, and dynamic content extraction.

- **NLP Techniques for AI Agents:** Core NLP techniques like tokenization, stopword removal, stemming, and lemmatization preprocess legal text, improving accuracy in clause detection and enabling AI to analyze complex contracts effectively.
  - **Preprocessing Pipeline:** Legal text preprocessing breaks down documents into tokens, assigns numerical IDs, removes filler words, and normalizes terms, creating clean inputs that AI models can analyze reliably.
  - **Text Representation: How AI Understands Language:** Techniques like Bag-of-Words, TF-IDF, and word embeddings convert legal text into numerical forms, allowing AI agents to quantify language patterns, semantic meaning, and document similarities.
- 

### 3.2 Language Models

- **Types of Language Models:** Models evolved from simple n-grams and RNNs to advanced transformers like GPT, which read full clauses simultaneously for deeper legal reasoning and precise text generation.
  - **Dialogue Management: Making Legal Agents Conversational:** Dialogue management systems detect user intent, extract key info, and generate responses, enabling AI legal agents to hold natural, relevant conversations with clients and legal staff.
  - **What Are Large Language Models (LLMs):** LLMs are AI systems trained on vast text data to understand and generate human-like language, forming the cognitive core of intelligent legal assistants capable of summarizing and drafting complex texts.
- 

### 3.3 Customizing GPT for Legal Work

- **Tailoring AI to Perform Like a Legal Specialist:** Fine-tuning GPT on legal datasets and using retrieval-augmented generation enables models to draft precise legal documents, reduce hallucinations, and provide contextually relevant legal advice.
  - **Hands-On Activity: Drafting a Termination Clause Using GPT:** Comparing vanilla GPT to context-augmented versions highlights how prompt structure and customization critically influence the quality and relevance of AI-generated legal clauses.
- 

### 3.4 The Rising Role of Prompt Engineering in Legal AI

- **Prompt Engineering in Legal Technology: A Paradigm Shift:** Effective prompt design is vital for legal AI, improving research, drafting, and workflow management by ensuring outputs are legally accurate, jurisdiction-specific, and tailored to complex tasks.
- **Balancing Accuracy, Ethics, and Efficiency:** Legal prompt engineering balances generating precise, unbiased AI responses with ethical considerations like confidentiality and compliance, ensuring trustworthy and responsible AI use in law.
- **Features and Impact of Legal Prompt Engineering:** Legal prompts must reflect complex language, interpretive reasoning, and jurisdictional nuance to guide AI models in producing legally sound, fair, and contextually appropriate outputs.
- **Benefits and Strategic Impact of Legal Prompt Engineering:** Good prompt engineering boosts legal AI accuracy, efficiency, and compliance, reducing review times, cutting costs, and safeguarding data privacy—driving higher productivity and trust in AI tools.

## AI Agents for eDiscovery

---

### 4.1 Introduction: What Is eDiscovery and Why Automate It?

- **The Traditional Bottlenecks: A Slow, Costly, and Risky Path:** Manual eDiscovery is slow, expensive, prone to human error, and struggles with huge, diverse data sets—leading to missed evidence, inconsistent review, and delayed case progress.
  - **The Dawn of AI Agents: Transforming eDiscovery:** AI agents rapidly process and analyze vast datasets, enhance review accuracy, identify semantic patterns beyond keywords, reduce costs, and enable strategic prioritization in legal discovery workflows.
  - **DISCO Ediscovery Platform and its AI Capabilities:** DISCO is a cloud-native, AI-powered eDiscovery platform offering scalable data management, intuitive review, AI tagging, legal hold, timeline visualization, and efficient production workflows.
- 

### 4.2 Introduction to DISCO AI (Cecilia)

- **The Evolution of AI within the DISCO Platform:** DISCO evolved from basic TAR and duplicate detection to advanced, continuous AI learning features like CAL, NLP-powered insights, and interactive user-driven AI enhancements.
  - **Core AI Functionalities and How They Are Integrated into the Ediscovery Workflow:** DISCO's AI capabilities—tag prediction, Q&A, topic indexing—are embedded throughout the workflow, enhancing review efficiency and making AI accessible without specialized expertise.
  - **Emphasis on AI Being Built "For and By Lawyers":** DISCO's AI is crafted with legal users in mind, focusing on real-world challenges, usability, defensibility, and delivering actionable, legally sound outputs with transparent AI decisions.
- 

### 4.3 Cecilia Q&A

- **Functionality:** Users ask complex, contextual questions; Cecilia interprets intent, searches document databases semantically, and delivers precise, cite-backed responses, enabling iterative and deep legal inquiry.
  - **Evidence-Based Answers with Direct Citations from the DISCO Database:** Cecilia links every AI-generated answer to exact source documents and excerpts, enabling verification, context understanding, and reliable evidence gathering within legal workflows.
  - **Use Cases:** Ideal for fact investigation, rapid data retrieval, early case assessment, deposition prep, and pinpointing key documents—reducing reliance on complex Boolean searches and accelerating review.
- 

### 4.4 AI-Powered Investigations with Reveal AI

- **Key Capabilities and AI Features of Reveal AI:** Features include sentiment and behavioral analysis, entity linking, communication mapping, topic modeling, auto-clustering, and privilege detection—transforming raw data into actionable legal intelligence.
- **Advantages and Ethical Considerations:** Reveal AI boosts speed, accuracy, and insight while raising ethical concerns around automation reliance, data privacy, bias, and transparency, advocating human oversight for responsible AI use.

## Module 5

# Contract Review in Legal Workflows

---

## 5.1 What is Contract Review?

- **Contract Review Across Organizations:** Contract review systematically examines clauses to ensure fairness, clarity, and alignment with policies, identifying risks and ambiguities that could lead to disputes or compliance failures.
  - **Strategic Value of Robust Contract Review:** Effective review accelerates deal closure, standardizes negotiations, enhances compliance agility, and enables data-driven insights—turning contract review into a strategic business enabler.
  - **Limitations of Manual Clause Review:** Manual review is slow, inconsistent, error-prone, and lacks visibility, leading to increased legal risk, fatigue-driven mistakes, and operational bottlenecks in high-volume contract environments.
  - **How AI Agents Support Contract Review:** AI agents automate clause identification, risk scoring, compliance checks, and redlining, delivering scalable, consistent, and faster contract review with improved accuracy and policy alignment.
- 

## 5.2 What Is an AI Contract Review Agent?

- **Key Functions Performed by AI Agents:** Core functions include clause extraction, risk identification with scoring, automated redlining suggestions, compliance monitoring, and real-time contract summarization for business stakeholders.
- **Benefits of AI-Powered Contract Review:** AI enhances speed, consistency, scalability, accuracy, auditability, and integration, enabling legal teams to handle large volumes efficiently while minimizing errors and manual workload.
- **Techniques Used in AI-Powered Contract Review:** Advanced NLP, machine learning, and large language models enable AI agents to extract clauses, score risks contextually, and automate redlining, transforming contract review into an intelligent process.

## Module 6

# Legal Research Agents

---

## 6.1 What is a Legal Research Agent?

- **Why Legal Research Agents Matter Today:** They address information overload by delivering rapid, consistent, and context-aware legal insights, enabling lawyers to keep pace with evolving laws and complex jurisdictions.
  - **Challenges in Traditional Legal Research:** Manual research is time-consuming, prone to human error, inconsistent across users, and often struggles with navigating multiple databases and interpreting complex legal language.
  - **How AI Transforms Legal Research:** AI offers semantic understanding, speed, precision, scalability, and automation, serving as a first-pass tool that augments lawyer expertise while reducing routine workload.
-

## 6.2 Real-World Insights — AI Lawyer in Action

- **How AI Lawyer Functions:** Employs fine-tuned NLP models trained on legal corpora to parse, summarize, and interpret judicial texts, providing structured, actionable legal insights tailored to user queries.
  - **Key Judicial Opinions on Termination Without Notice:** Summarizes landmark cases and legal principles guiding employment termination without notice in India, illustrating AI's ability to deliver jurisdiction-specific, case-based legal summaries.
- 

## 6.3 AI Legal Research – Use Cases in Practice

AI legal research tools enable efficient case summarization, precedent extraction, and automated citation generation, improving legal education, litigation preparation, and cross-jurisdictional analysis.

### Module 7

## Compliance & Risk Monitoring Agents

---

### 7.1 Compliance and Risk Monitoring

- **Why Compliance and Risk Monitoring Matter:** Highlight growing regulatory complexity, global data flows, and real-world consequences like fines, emphasizing the critical role of real-time monitoring to prevent costly compliance failures.
  - **The Evolution of Monitoring:** Trace the shift from manual, periodic audits to dynamic, AI-driven systems offering continuous, scalable, and accurate compliance and risk oversight.
  - **The Road Ahead:** Prepare learners to build and integrate AI compliance agents for real-time alerts, automated checks, and proactive governance aligned with key regulations like GDPR and HIPAA.
- 

### 7.2 Compliance & Risk Monitoring Agents

- **Importance in Modern Industries:** Discuss the essential role of these agents in regulated sectors such as finance, healthcare, e-commerce, and HR, where compliance breaches carry significant financial and reputational risks.
- **Why These Agents Are Essential:** Explain how AI agents reduce manual workload, deliver real-time regulatory updates, flag risks early, and help avoid fines and operational disruptions.
- **Real-World Example:** Showcase a fintech firm deploying AI agents to monitor regulatory updates, flag contract gaps, and accelerate compliance, illustrating practical benefits and impact.
- **Coverage of Key Regulations in Compliance & Risk Monitoring:** Review AI monitoring for major data protection laws: GDPR (EU), HIPAA (US), and DPDP Act (India), highlighting their unique compliance demands and AI adaptation.
- **Architecture of a Compliance Monitoring Agent:** Break down core components—source watcher, NLP rule extractor, policy mapper, notifier module—that enable real-time regulation tracking and internal policy alignment.

---

**7.3 Hands-On Activity:** Guide learners in building a basic compliance alert bot using no-code tools, simulating AI-driven regulatory scanning, impact analysis, and stakeholder notification workflows.

## Module 8

# Legal Chatbots & Virtual Legal Assistants

---

## 8.1 Introduction to Legal Chatbots

- **Evolution of Legal Chatbots:** Learn how legal chatbots evolved from rule-based tools to intelligent AI assistants, reshaping legal service models, client onboarding, and document generation with greater efficiency.
  - **Why Legal Chatbots Matter:** Value Proposition: Discover the value legal chatbots bring—24/7 service, reduced lawyer workload, cost savings, and improved user satisfaction—while enhancing access to justice for underserved populations.
  - **Regulatory & Ethical Considerations:** Examine ethical challenges like bias, misinformation, unauthorized practice of law, and data privacy—ensuring legal chatbot development aligns with jurisdictional guidelines and professional standards.
  - **Types of Legal Chatbots:** Explore various legal chatbot types including intake bots, document generators, advisory bots, and litigation helpers, tailored to different legal functions and client needs.
  - **Rule-Based vs. AI-Based Legal Bots:** Compare rule-based bots using decision trees with adaptive AI-based bots using NLP and LLMs, evaluating trade-offs in accuracy, complexity, and context-awareness.
- 

## 8.2 Key Use Cases in Legal Practice

- **Client Intake Automation:** Learn how chatbots streamline client intake by collecting data, performing conflict checks, and routing cases—enhancing speed, accuracy, and client onboarding experiences.
  - **Legal FAQs and Document Assistants:** Explore how AI bots answer common legal questions and assist in drafting NDAs, agreements, and letters, reducing dependency on lawyers for routine documentation.
  - **Small Claims and Self-Representation Tools:** Discover how bots help citizens prepare for small claims, generate filings, and understand legal rights, empowering self-representation in low-stakes cases.
- 

## 8.3 Legal Architecture & Design Principles

- **Legal Chatbot Architecture:** Explore the technical and logical layers of chatbot design—user input capture, NLP engines, response generation, legal validation, and feedback loops.
- **Evaluation Metrics for Legal Chatbots:** Discover key performance indicators like accuracy, user satisfaction, compliance adherence, and legal soundness used to assess chatbot effectiveness in legal settings.
- **Legal Risk Exposure Metrics:** Learn how to measure legal risk from chatbot usage—tracking liability, misinformation, escalation triggers, and compliance gaps to ensure responsible deployment.
- **Implementation: AI-driven Contract Review Chatbot:** Explore how to build a chatbot that reviews contracts using LLMs, highlighting clauses, flagging risks, and suggesting edits—bridging AI with real legal workflows.



## AI Agents for IP Filing and Patent Drafting

---

### 9.1 Introduction to AI in IP Filing and Patent Drafting

- **Understanding Intellectual Property (IP):** Learn about patents, trademarks, copyrights, and trade secrets—what they protect, their legal value, and how IP fuels innovation and business competitiveness.
  - **How AI is Transforming IP Practices:** Discover how AI enhances IP operations by automating novelty searches, claim generation, and legal documentation—minimizing human error and increasing productivity in IP law firms.
- 

### 9.2 Core AI Agent Functionalities

- **Technical Features of AI Agents for Patent Drafting:** Learn about NLP, knowledge graphs, and transformer models that power AI agents, helping them interpret inventions and draft technically sound patent claims.
  - **Implementing AI Agent Workflows in IP Filing:** Discover how to design AI-driven patent workflows—from inventor input collection to automated claim generation and form filling—boosting efficiency and standardization.
  - **Integration Strategies:** Explore how legal teams integrate AI tools with IP management systems, CRMs, and document repositories to streamline drafting, filing, and client reporting.
  - **AI Agent Workflow in Action:** Review a step-by-step simulation of AI agents assisting in patent claim drafting, prior art search, and risk assessment, ensuring end-to-end IP support.
  - **Challenges and Ethical Considerations in AI Agent Deployment:** Understand concerns around ownership, originality, liability, and regulatory compliance when deploying AI in patent processes, and how to address them responsibly.
  - **Real-world Case Studies of AI Agents in IP Management:** Explore how law firms and corporations successfully use AI for faster filings, improved accuracy, and cost savings in managing complex patent portfolios.
- 

### 9.3 Introduction to AI Tools for Patent Drafting and Management

- **Prominent AI Tools:** Learn about top tools in the IP space—features, integrations, pricing models, and real-world applications helping patent agents and attorneys boost productivity.

## Case Outcome Prediction Agents

---

### 10.1 Introduction to Case Outcome Prediction?

- **Understanding Use Cases:** Discover real-world applications of outcome prediction, from assessing win probability to guiding settlement decisions and resource allocation across litigation and compliance teams.
  - **Benefits of Using Machine Learning in Legal Predictions:** Learn how ML improves prediction accuracy, reduces bias, automates pattern recognition, and provides data-backed insights to optimize case strategies and legal outcomes.
-

## 10.2 Feature Engineering in Legal Case Outcome Prediction

- **What Is Feature Engineering:** Explore the process of converting raw legal data into meaningful inputs for ML models, including text tokenization, numerical scoring, and semantic tagging.
  - **Types of Legal Features:** Learn to identify structured and unstructured legal features, such as party type, jurisdiction, claim nature, legal arguments, and prior rulings to train predictive models.
- 

## 10.3 The Rise of Multi-Agent Legal Workflows

- **What Are Multi-Agent Systems:** Learn about systems where multiple AI agents work together—sharing tasks, exchanging data, and coordinating to manage complex legal processes efficiently.
- **Modular Architecture Overview:** Explore modular agent design where each AI module specializes in a legal task—research, review, summarization—linked by workflows to ensure seamless operations.
- **Key Concepts in Agent Coordination:** Understand how legal AI agents communicate, synchronize actions, resolve conflicts, and make joint decisions to maintain reliability in multi-step legal tasks.
- **Tools & Technologies:** Discover platforms like LangChain, OpenAI, and AutoGen used to build, deploy, and manage multi-agent systems for enterprise-grade legal workflows.

## Module 11

## Ethics, Fairness, and Transparency in Legal AI

---

### 11.1 Managing Bias in Legal AI

- **Diagnosing and Identifying Bias in Legal AI:** Explore sources and types of bias in legal AI systems, their ethical and legal impacts, and how bias can unfairly influence AI-driven legal decisions.
  - **Ensuring Auditability and Transparency in Legal AI:** Discover methods to design transparent AI systems with audit trails, explainable decisions, and compliance with regulatory requirements for trustworthy legal AI deployment.
  - **AI Hallucination Risk Mitigation:** Understand the causes and dangers of AI hallucinations in legal contexts, and apply strategies like retrieval augmentation, prompt engineering, and human oversight to minimize errors.
- 

### 11.2 Legal Accountability in Autonomous Agent Deployment

- **What Are Autonomous Agents in Legal AI:** Learn about AI agents capable of autonomous decision-making in legal processes, their functionalities, and the balance between automation and human control.
- **Accountability Challenges in Legal AI:** Discover common accountability gaps arising from AI opacity, liability confusion, bias propagation, and overreliance, and their implications for legal professionals.
- **Assigning Responsibility in Legal AI Deployment:** Explore frameworks for allocating accountability among developers, deployers, users, and clients to manage risks and uphold ethical legal AI practices.
- **Regulatory and Ethical Frameworks for AI Accountability:** Understand global regulations and ethical guidelines shaping legal AI governance, emphasizing transparency, human oversight, data protection, and professional compliance.

## Capstone Project – Building Your AI Legal Agent

---

### 12.1 Applying AI to Solve Real Legal Problems

- **Identify Your Input Type:** Learn to classify and select appropriate input formats—text, forms, documents, or chat history—to ensure your AI agent processes data accurately and efficiently.
- **Clean and Structure the Input:** Discover techniques for cleaning and structuring raw legal data, removing noise, and standardizing formats to optimize AI understanding and output quality.
- **Craft High-Quality Prompts:** Master prompt design by creating clear, specific, and context-rich instructions that guide AI to generate relevant, accurate, and actionable legal outputs.
- **Test Prompt + Input Combinations:** Practice testing various input-prompt pairs to refine AI responses, improve accuracy, handle edge cases, and ensure reliability across diverse legal scenarios.

---

### 12.2 Document Your Inputs and Prompts

- **Why Testing and Iteration Matter in Legal AI:** Understand the critical role of rigorous testing and iterative refinement to ensure legal AI agents deliver trustworthy, compliant, and user-friendly outcomes.
- **Finalizing Your Prototype for Presentation:** Prepare your AI legal agent for demonstration by validating functionality, clarifying limitations, designing user-friendly interfaces, and crafting effective presentations.
- **AI Contract Reviewer – Capstone Project Plan:** Apply learned concepts to build a no-code AI contract reviewer that identifies clause risks, suggests improvements, and accelerates legal review for in-house and law firm users.