# AI Patents: A Practical Guide for Inventors and Businesses

**By Robert Greenspoon**

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Every tech team knows this moment. Your AI model suddenly outperforms every previous version. The breakthrough is real, measurable, and potentially worth millions. But here's the catch: without adequate protection, competitors can legally copy your innovation once you demonstrate it publicly.

AI patents present unique challenges in today's innovation landscape. Unlike traditional software, AI inventions raise complex questions about human versus machine contributions, technical improvements that are invisible to users, and rapidly evolving legal standards that even experienced patent attorneys work to navigate.

Why this matters goes beyond protecting a single invention. Strong AI patent portfolios attract investors, deter competitors, and create licensing opportunities that fund future research. Companies that develop patent strategies early often secure broader protection before competitors enter the field. Understanding these issues also helps avoid costly mistakes that might invalidate patents or trigger expensive litigation.

As intellectual property attorneys who've worked with AI companies on patent protection, we've observed different approaches. Some companies wait until after public disclosure or investor pressure to consider patents, which results in weaker protection and higher costs. Others integrate patent planning into product development from the beginning. The difference often isn't technical expertise but rather understanding how patent law intersects with AI innovation cycles.

**What Kinds of AI Innovations Are Patentable?**

Patent law allows protection for AI inventions that solve technical problems in new ways. The key question is whether your AI system enhances how computers operate, rather than merely applying existing AI to a new business area.

Examples of patentable AI innovations include new methods for training models that demonstrate improved speed or accuracy, systems that reduce computer memory or power consumption, speech recognition technology that performs better in noisy environments, and medical AI tools that enhance diagnostic accuracy.

What doesn't qualify includes using existing AI in a new application without technical innovation, business methods that simply incorporate AI, or abstract ideas without concrete technical improvements.

The USPTO updated its examination guidelines in 2024, providing specific examples that address when AI patents are allowed, with an emphasis on concrete technical improvements over general business applications.

# Who Can Be Listed as an Inventor?

Under current U.S. patent law, only humans can be named as inventors on AI patents, not AI systems themselves, even when AI plays a substantial role in the development process. However, courts have established that human contribution must be significant, not merely supervising AI or accepting its suggestions.

What courts have considered significant human contributions include defining the technical problem the AI should solve, designing the AI system architecture, making key decisions about training data or algorithms, and interpreting AI outputs to create the final solution. Activities that haven't met this threshold include simply running AI prompts, providing data to an AI system without substantive creative input, or accepting AI recommendations without substantial creative input.

Maintaining detailed documentation of human decision-making throughout development is important if inventorship is later questioned during examination or litigation.

# What to Expect When Seeking AI Patents

Obtaining an AI patent isn't automatic, even with strong technical documentation. The process often takes several years, and outcomes vary considerably.

According to IFI Claims data reported by Axios (February 2024 to April 2025), AI patent applications increased 56% in the most recent year to 51,487 applications. However, many applications face initial rejections and extended prosecution periods.

Different USPTO examination groups have notably different approval rates. While some approve approximately 79% of AI applications, others apply stricter standards. Even well-prepared applications typically require multiple rounds of amendments, and examiners interpret similar technologies differently. The timeline from filing to grant typically ranges from two to four years.

# Key Requirements for AI Patent Applications

## Technical Detail Requirements

Patent applications require sufficient detail for someone skilled in the relevant field to recreate your system. For AI patents, this means describing data preparation and usage methods, the specific AI model structure, training procedures and parameters, operational mechanics, and measurable improvements achieved.

## Claim Drafting Considerations

Patent claims define the scope of protection. For AI patents, experienced practitioners focus on the specific technical improvements the system provides, how the approach differs from existing methods, observable results that demonstrate the improvement, and concrete implementation steps rather than abstract concepts.

Claims that merely describe what the AI accomplishes without explaining how it works differently or achieves better results face eligibility challenges during examination.

# Enforcement Considerations for AI Patents

AI patents present enforcement challenges compared to traditional patents. AI systems often run on servers that alleged infringers don't make publicly accessible, making it difficult to determine if someone is using specific methods. Competitors also achieve similar results through different technical approaches.

When drafting applications, practitioners address these challenges by including claims directed to observable behaviors and measurable outputs in addition to internal AI processes.

## Disclosure and Professional Responsibility

### When AI Tools Assist in Patent Preparation

When using AI tools to help draft patent applications, practitioners verify the technical accuracy of all statements, confirm that cited sources are real and relevant, maintain human oversight of legal analysis, and consider whether to disclose AI assistance when it substantially affects the content.

### Professional Responsibilities

Patent attorneys using AI tools have ongoing obligations regarding client confidentiality and supervision of AI-generated work. Professional standards in this area continue to evolve as these tools become more prevalent in legal practice.

# Frequently Asked Questions

**How long does AI patent protection last?** U.S. utility patents provide up to 20 years of protection from the filing date, provided that the required maintenance fees are paid.

**Can I patent AI training data?** Raw data alone doesn't qualify for patent protection, but specific novel methods for collecting, processing, or using training data can be patentable if they provide technical improvements.

**Should I seek a patent for my AI innovation or maintain it as a trade secret?** This decision depends on multiple factors specific to each situation. Patents are preferable when competitors could discover your methods by examining your product. Trade secrets work better when the innovation remains hidden on internal servers and can't be reverse-engineered. This is an important strategic decision that should be made in consultation with a patent attorney who understands your specific circumstances.

**What do AI patents cost?** Costs vary based on complexity and scope. Total expenses, including attorney fees, typically range from $15,000 to $25,000 or more for a U.S. utility patent application, with additional costs for international filings. Maintenance fees are due at 3.5, 7.5, and 11.5 years after grant.

# What Successful Applicants Often Do

### 1 Maintain Thorough Documentation

Many successful applicants maintain thorough documentation of their development process, including records of human decision-making and contributions throughout the innovation cycle. This documentation proves valuable when questions of inventorship arise during examination or in later disputes.

### 2 Avoid Early Public Disclosure

Successful applicants typically avoid public disclosure before filing their patent applications. Presenting at conferences or publishing papers before filing can create prior art that affects patent rights, so many companies consult with patent counsel about timing before making any public announcements about their innovations.

### 3 Work with Experienced Patent Counsel

Companies that build robust AI patent portfolios typically work with patent counsel experienced in AI technologies from the outset of the development process. Because this area of law involves complex and evolving standards, having experienced guidance from the outset often results in stronger applications and better strategic positioning.

### 4 Strategic Geographic Planning

Strategic thinking about geographic markets also characterizes successful patent programs. Companies consider which countries and regions are relevant to their business model when deciding where to file applications, balancing the costs of international filing against the commercial importance of different markets.

The legal landscape for AI patents is continually evolving. Standards that apply today can shift as courts and the USPTO address new issues, making experienced legal guidance valuable for protecting AI innovations.


# Learn More About Protecting Your AI Innovation

Interested in discussing patent protection for your AI innovation? Our intellectual property attorneys can help you evaluate your specific situation and develop a strategy aligned with your business objectives.

Dunlap Bennett & Ludwig is a veteran-owned law firm with offices across multiple states. Our team works with companies navigating the technical and legal complexities of protecting artificial intelligence innovations.

To learn more about Dunlap Bennett & Ludwig, call **888-306-4030** or email **clientservices@dbllawyers.com**.

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