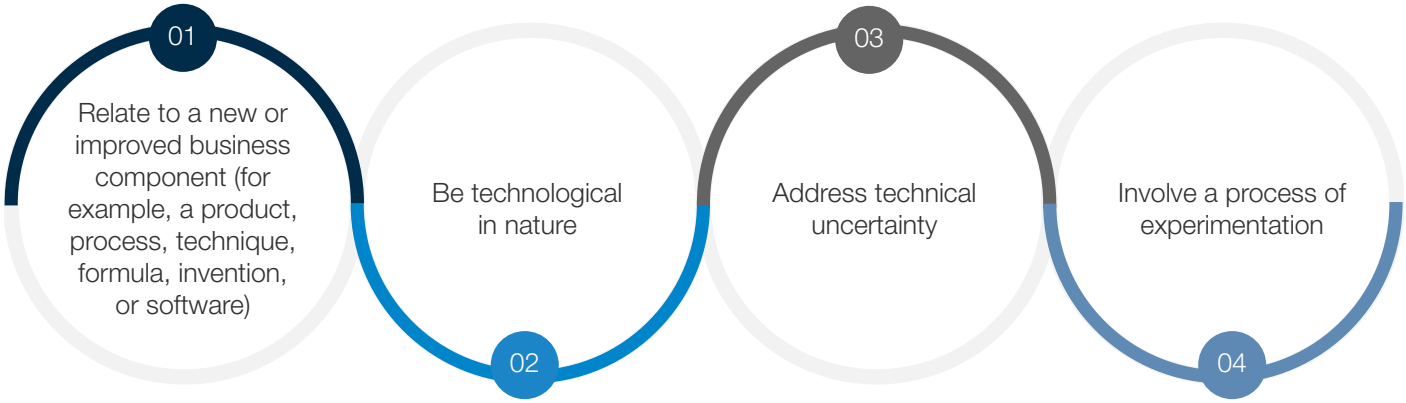
A&M | TAX

AI and the R&D Tax Credit:
Where the Opportunity Is Real

Artificial intelligence (AI) is now embedded across nearly every sector of the economy. Companies are using AI in drug discovery, streaming platforms, fraud detection, claims processing, vehicle systems, robotics, and due diligence. For purposes of the research and development (R&D) tax credit, the question is not whether a company "uses AI," but whether the company is actually building or improving technology in a way that involves technical uncertainty and a process of experimentation.

AI, like all R&D activities, must satisfy the following four-part test to qualify for the Internal Revenue Code Section 41 R&D tax credit:



These distinct requirements matter because AI is often described too broadly. Labels like "automation," "analytics," and "machine learning" do not automatically mean an initiative qualifies under Section 41.

The Core Distinction: Development vs. Deployment

Some AI initiatives involve meaningful technical development. Others are better described as implementation or use of commercially available tools. In practice, qualifying AI initiatives tend to involve projects and tasks such as:

More likely to qualify (Development)

- Development and refinement of proprietary AI or machine learning models
- Design and optimization of algorithms
- Engineering custom data pipelines and training frameworks
- Model validation and performance tuning
- Integration of AI into production environments where custom technical solutions are required

Less likely to qualify (Deployment)

- By contrast, activities are much less likely to qualify for the R&D credit where the work is primarily about deploying an off-the-shelf platform
- Activating a vendor tool
- Creating dashboards
- Training employees on how to use existing software, rather than developing or materially improving technology

What the Company Was Actually Trying To Solve?

In practice, the key questions are always the same: what was the company actually trying to build or improve, what technical problems existed at the outset, and what alternatives were tested?

In the AI context, technical uncertainty can arise in many forms, including whether:

- A model can achieve the required level of accuracy
- A system can scale reliably
- A workflow can be integrated into legacy environments
- A particular design will produce consistent results
- A technical approach can satisfy speed, reliability, explainability, or cost constraints

The stronger R&D credit fact patterns typically explain the technical problem, why existing approaches did not work, and how the team tested different ways to arrive at a solution.

If the initiative is about building or materially improving technology, then it may qualify for the R&D credit. If it is mostly about buying a tool, activating it, and training people to use it, the answer is often very different.

What Usually Qualifies

The rules do not change by industry, but the way qualifying activities appear often does. AI can appear in very different forms depending on the business, the technical objective, and the systems involved.

Technology and Software

In technology and software companies, qualifying AI-related work often appears in:

- Model development and training
- Algorithm design
- System architecture
- Platform integrations
- Cloud-based infrastructure
- Cybersecurity tools
- Performance optimization
- Internally developed software tools

Manufacturing

In manufacturing, AI may be embedded in:

- Process improvements
- Robotics
- Defect detection
- Predictive maintenance
- Demand forecasting
- Digital twins
- Real-time monitoring systems.

A “digital twin” is a virtual model of a physical asset, process, or system that is used to simulate performance, test changes, or predict outcomes.
Where companies are developing or materially improving those systems, there may be a strong R&D credit justification.

Media and Entertainment

In media and entertainment, relevant work may include:

- New streaming technologies
- Improved video compression
- Content delivery platforms
- Recommendation engines
- Audience analytics tools
- Virtual or augmented reality solutions
- More efficient post-production workflows

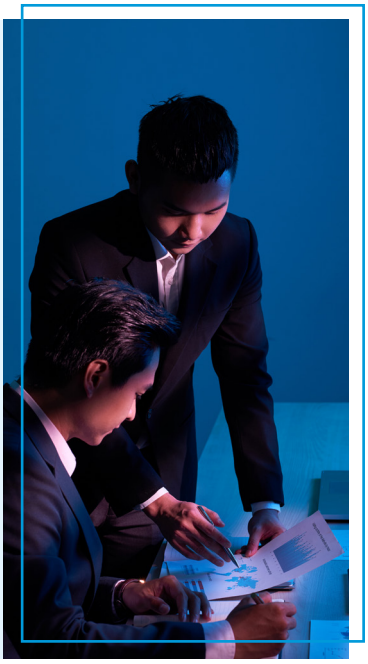
The key is whether the company is materially improving the underlying technology or solving substantive technical problems, not simply layering analytics on top of existing systems.

Financial Services

In financial services, AI is already being applied across asset and wealth management, banking, and insurance. Examples may include:

- Platform modernization
- Portfolio analytics tools
- Cloud migration
- Know-your-customer (KYC) onboarding solutions
- Credit decisioning models
- Claims triage tools
- Underwriting platforms
- Fraud detection systems
- Workflow automation

KYC refers to the processes that financial institutions use to verify customer identity, assess risk, and satisfy regulatory requirements. Those efforts may involve qualifying development activities where the company is building or materially improving the underlying technology, rather than simply implementing a compliance tool.



Automotive

In automotive, AI-related work may arise in:

- New vehicle platforms
- Battery systems
- Thermal management
- Powertrain optimization
- Autonomous driving systems
- ADAS calibration
- Sensor integration
- Crashworthiness
- Vehicle software

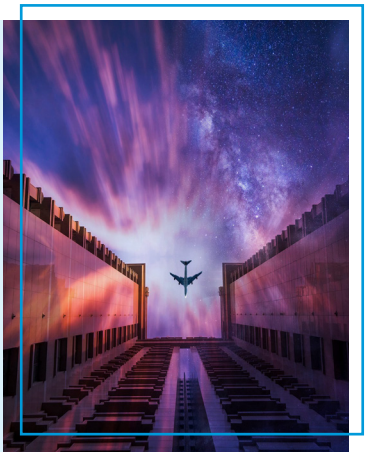
ADAS refers to advanced driver-assistance systems, such as lane-keeping, adaptive cruise control, automatic braking, and other technologies that assist the driver. Work in this space may qualify when teams are testing how sensors, software, and control systems interact under changing real-world conditions

Aerospace, Defense and Aviation

In aerospace, defense, and aviation, AI and advanced analytics often support:

- Avionics
- Navigation systems
- Autonomous systems
- Propulsion
- Advanced materials
- Ground operations optimization
- Safety or performance improvements

These are often highly technical environments where uncertainty, experimentation, and iterative testing are already part of the development process.



Life Sciences

In life sciences, AI is increasingly relevant in:

- Drug discovery
- Predictive toxicology
- Clinical trial design
- Manufacturing
- Diagnostics
- Patient care applications

This is another area where the presence of AI does not, by itself, create eligible R&D credit activities. However, when the company is engaged in technical development, model refinement, testing, and validation, the R&D credit opportunity can be significant.

The Common Theme Across Industries

The common thread is that AI may be part of meaningful technical development across many sectors. The question is not the label attached to the initiative. The question is whether the company is solving technical problems, testing alternatives, and creating or improving technology in a way that satisfies the four-part test.

AI in M&A and Due Diligence

AI also matters in mergers and acquisitions, not just inside the target business but also in the deal process. The current M&A diligence landscape reflects a growing focus on embedding an AI lens into due diligence, assessing AI maturity, prioritizing AI use cases, estimating value-creation potential, and using AI to improve diligence quality, risk identification, and EBITDA analysis. That broadens the conversation beyond whether the target company uses AI in its operations. It also raises questions about how AI affects valuation, diligence, and post-deal value creation.

Why This Matters for the R&D Credit

M&A / Diligence Lens

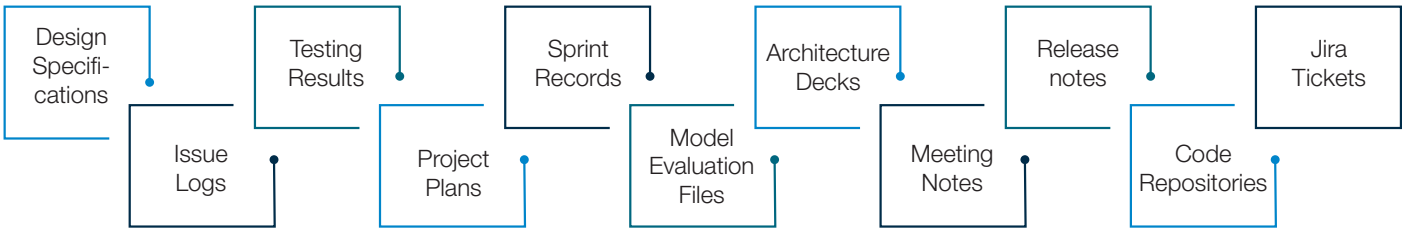
AI does not automatically turn diligence work into an R&D credit opportunity. But it does create a broader set of fact patterns worth evaluating. In some cases, the target business may already be performing qualifying technical work. In others, the diligence process may surface technology initiatives, development efforts, or post-close build plans that open the door to future R&D credit opportunities.

Industry section

For advisors, that makes AI a useful lens not only for evaluating the business, but also for identifying where technical development may translate into tax savings opportunities after the deal.

Documentation: What Good Looks Like

Documentation remains a key issue in IRS audit defense. Companies often describe AI work too generally. For example, they may claim that they "implemented AI" or "built automation," but do not clearly capture what was uncertain, what alternatives were considered, what testing was performed, what changed along the way, or what technical teams did. Strong documentation explains the technical objective, the uncertainty at the outset, the experimentation performed, the people involved, and the records that support the work. The best support is usually the documentation technical teams already create, for example:



How AI Can Help With Documentation

AI can also improve the documentation process. AI can help:

- Identify potentially qualifying activities
- Track development iterations
- Analyze technical records
- Organize contemporaneous documentation
- Pre-qualify business components
- Reduce time spent with engineering teams
- Strengthen the link between projects, employees, and activities

In other words, AI may be relevant both to the underlying development work and to the process of documenting and defending the R&D credit claim.

This is an important point, as companies adapt to evolving IRS documentation requirements and the increasing volume of technical data generated by modern development environments.

Bottom Line

AI work does not automatically qualify for the R&D tax credit just because it involves AI. The same rules still apply.

The strongest opportunities tend to arise when a company is building or materially improving technology and must work through technical uncertainty by testing alternatives. That may include model development, algorithm optimization, custom integration, performance improvement, or solving technical problems that did not have a known answer at the outset.

If the initiative is primarily about deploying a finished tool, activating existing software, or training people to use a purchased platform, the answer is often very different.

That is where the line is, and that is where the analysis needs to start.

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