# Demonstrating value in the AI startup race: Q&A with Jordan Jacobs

FEATURING

**Jordan Jacobs, Managing Partner and Co-founder, Radical Ventures**

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**We have entered the era of AI. As someone who has been investing in, and championing, the space for a long time, what do you think is next for the industry?**

I think two very significant things are next:

1. Software - The infrastructure of 1s and 0s that has powered the digital age and created trillions of dollars in value and productivity is at the beginning of a major upgrade cycle. Over the next decade, virtually every bit of software will be replaced by Artificial Intelligence (AI) or embedded with it. The implications for our world and the global economy are profound.

Traditional software is hard-coded and static. Once shipped and deployed, it never improves until the next version is shipped and replaces it. Soon, all software will be powered by AI that learns and improves, often in real time. Built around learning algorithms that adapt to new situations, AI software is more efficient and effective. This is particularly true for generative AI, which can create new data or software code on its own, without the need for human input. This coming software replacement cycle will have an extraordinary impact on our economy. Incumbent software companies will be forced to produce upgraded AI software or face new AI-driven competitors offering far superior solutions. Every industry will need to adopt new AI software to stay ahead of both their existing competitors and new entrants who are AI-native.

2. Transformers-based AI (the underpinnings of generative AI) will unlock major new discoveries and applications across the sciences: biology, chemistry, and physics.

**What advice would you give to founders who are building AI enterprises?**

Tackle hard and important problems. Building a business aimed at making incremental advances on existing technologies may find a market in the near term. However, in the long run, these businesses are vulnerable to competition or commodification by existing AI solutions. Whether it's tackling climate change, business productivity or curing cancer, AI is a technology capable of helping to solve many of the world's biggest challenges.

**Many corporations have begun to integrate AI into their operations, what opportunities does this present to startups in the space? How can organizations best leverage this technology?**

An AI startup's greatest opportunity is to create entirely new business models that disrupt traditional industries by leveraging the power of data and AI to do things that could never be done before. To make the most of AI innovation, organizations should focus on understanding their specific needs, identify areas where AI can add value, collaborate with AI startups for tailored solutions, and invest in training and upskilling their workforce to effectively use AI tools and technologies.

**How have you seen the industry change over the years?**

Radical's founders have been building AI companies and ecosystems and investing in the world's leading AI founders since before the beginning of the Deep Learning revolution over a decade ago, which transformed the early AI-adopting big tech companies into the most valuable businesses in the world.

That was just the warm-up act.

The transformer architecture—which underpins generative AI applications and products like ChatGPT—was invented six years ago. ChatGPT has brought AI into the mainstream and massively accelerated the adoption curve. Today, every industry is looking to adopt AI. And big tech companies are no longer the only innovators in this space. There has been an exodus of world-class AI talent from the large tech companies, choosing to strike out on their own. We're now seeing incredibly exciting and nimble AI startups emerge to challenge the hyperscalers and build solutions to previously intractable problems.

**What are the top areas you are most excited about?**

One of my personal motivations for starting Radical was to invest in companies that would help solve the biggest challenges facing humanity. When we were thinking of selling our AI company, Layer 6, to focus on building the leading AI investment firm, I said to my business partner and Radical co-founder, Tomi Poutanen: "AI will help cure cancers. Let's help cure cancer."

From AI for drug discovery to artificial human tissue generation, AI is and will transform human health in a very meaningful way.

**What are the biggest challenges facing AI startups?**

Attracting and retaining top-tier AI talent remains the biggest challenge for any AI startup. While we are seeing more researchers enter the space, demand for expertise in this field far outstrips supply.

Another very real challenge facing AI startups is securing the high-performance computational power (or "compute") necessary to develop AI models. Demand for AI chips that power AI innovation today is surging, while the supply remains heavily constrained. This is driving up costs for startups and, for those unable to secure allocations of compute, slowing their pace of development.

**Generative AI is getting a lot of attention, are there any other applications that you feel the industry will turn to, or should turn to, next?**

The transformer architecture that underpins Generative AI remains an extremely powerful innovation. Besides ChatGPT or speech-to-image generation that has created so much buzz over the past year, transformers are also being used to develop new drug proteins to fight disease and create accurate long-term weather models to help navigate climate change.

I expect us to see more sophisticated applications of transformers in the near future. For example, for software developers, generative AI created very effective versions of auto-complete for coding. That was the first generation of innovation. We are now seeing generative AI models capable of creating totally original code from scratch at a developer's request, and soon we will see entire applications created by generative AI tools without any human coding required. We expect to see this same kind of rapid evolution across multiple use cases and industries.

**As an investor, what do you look for when assessing a startup for investment?**

We look closely at many, many factors, including the founding team, the market opportunity, the differentiated technology and product they're building, competition, go-to-market strategy and effectiveness (including revenues where the company is beyond seed stage). Because we focus on AI companies, we also look at the team's ability to hire extraordinary talent and to access key compute.

**What are your thoughts on the regulation of AI in Canada?**

Regulation must safeguard Canadians by ensuring AI technologies are responsibly applied. However, regulation must not undermine innovation or the economic opportunities afforded by the technology. The current draft legislation in Canada lacks specificity except in respect of severe penalties for AI companies and founders (jail time and massive fines), leaving interpretation to the minister and undefined future government regulations. This approach creates a number of consequences due to the level of uncertainty and risk it poses to Canadian AI practitioners and founders.

If the legislation in Canada is not interoperable with the regulatory regime in the U.S., founders and investment will leave Canada. Similarly, existing Canadian AI companies may reincorporate in the U.S.

**What's your 10-year forecast for the industry?**

We are still in the very early innings of the AI revolution. Over the next ten years, we expect to see AI replace or be embedded in all of the software in the world, and to unlock an explosion of new science discovery and applications. And we may see significant leaps toward Artificial General Intelligence (AGI).

*Jordan Jacobs is Managing Partner and co-founder of Radical Ventures, an AI-focused VC firm based in Toronto with offices in Palo Alto and London, UK. Before Radical, Jordan co-founded Layer 6 AI and was co-CEO prior to its acquisition by TD Bank Group, where he joined as Chief AI Officer (Business & Strategy). Jordan is a founder of the Vector Institute for Artificial Intelligence in Toronto, a Director of the Canadian Institute for Advanced Research (CIFAR), and helped draft the Pan Canadian AI Strategy. Jordan is also a member of the University of Waterloo President's International Advisory Board and a Director of Tennis Canada.*

*Jordan started his career as a technology and entertainment lawyer, and received his JD from Osgoode Hall Law School in Toronto, where he was admitted at age 19.*

*To discuss these issues, please contact the author(s).*