

THNQ: Investing in Artificial Intelligence

Artificial intelligence: The most disruptive technology since the internet era

The advent of artificial intelligence (AI) is disrupting every organization, industry groups, and all aspects of our lives. The race to acquire top AI startups began with technology leaders such as Alphabet, Apple, Meta, and Microsoft dominating the space. Now, even non-technology giants such as Ford and John Deere are making AI-related deals and building out their own AI infrastructure. In fact, the majority of the top ten S&P 500 companies are where they are because they have been heavily investing in AI and machine learning systems.

Many of these companies cannot exist without AI. In healthcare, digital imaging technology powered by AI is detecting cancer better than a trained physician. In agriculture, farmers are relying on deep learning techniques to improve crop yields or they will cease to exist. Smart sensors and appliances in the home allows us to order everything from groceries to movies with the touch of a button. As AR/VR technology matures and prompts us to immerse ourselves in an increasingly virtual world, video game publishers are harnessing the power of the cloud and AI to create a personalized virtual experience from any mobile device with limited hardware. Future applications of AI are anticipated to help make our lives easier and more efficient.

We are on the cusp of creating new winners and losers in every industry that AI touches. We see AI impacting every corporation, industry, and segment of the economy over the coming years. Enterprises that fail to invest in AI will lose out to the early adopters of who will benefit from the productivity gains and capital efficiencies they will create.

Our classification of applied AI technologies includes machine learning; deep learning; advanced computer vision, which is key to autonomous vehicles and surveillance systems; predictive analytics applied in cybersecurity and fraud detection; natural language processing (NLP), which includes speech recognition; and natural language understanding, which is a building block for virtual agent (chatbot) technology. Additionally, this includes the underlying infrastructure that enables this technology to exist and understand the world in the first place, such as semiconductors, networking, cloud, sensors, and deep learning models.

Why now?

AI adoption is growing at an unprecedented rate thanks to the rise of machine learning algorithms



What is AI?

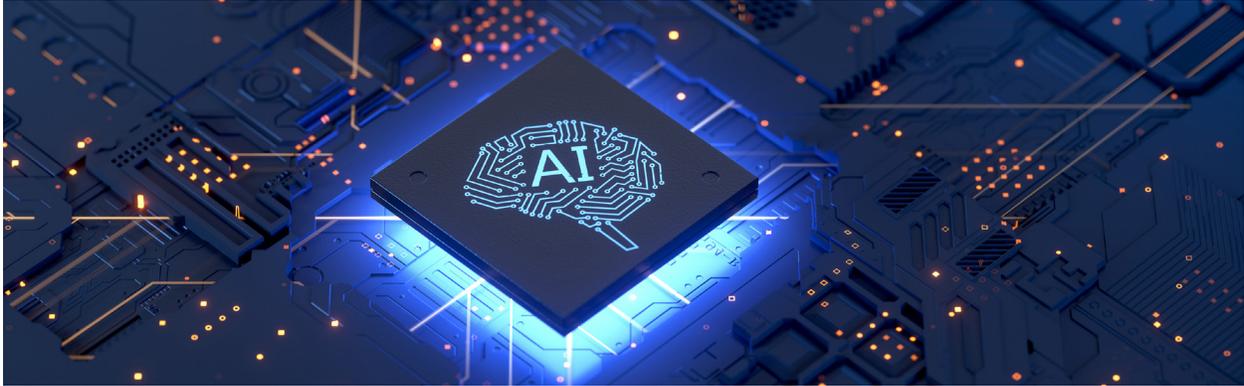
Artificial Intelligence is a branch of computer science that focuses on making machines imitate intelligent human behavior by making informed decisions with little to no human intervention.

and deep learning networks that are unlocking more out of data than ever deemed possible.

Every two years, we create more data than we've created in all of history. We need massive amounts of computational power and scalable storage to manage all this data created by smart devices and apps. Existing infrastructure is not equipped for this digital transformation we are experiencing.

What's fueling the AI revolution

 <p>Unprecedented growth and availability of data</p>	 <p>Rapid innovation and breakthroughs in chip processing power</p>	 <p>New infrastructure framework is going built by industry leaders</p>	 <p>Major transformation of the labor force</p>
---	---	---	---



The world around us is changing, transforming how we work, play, and live our daily lives. This makes AI potentially one of the greatest investment opportunities of our generation. While the field of AI has been around since the 1950s, it has recently begun to move from the experimental phase to commercial application. Historically, the stock market tends to under-appreciate the scale of opportunity enjoyed by leading providers of new technologies at this phase of development. AI is both disrupting and forcing us to rethink the world around us.

Artificial intelligence is creating value across all industries. Companies such as Amazon and Alphabet are employing AI across all of their businesses, ranging from cloud hosting services and recommendation engines to fraud detection and personal assistants. Microsoft has not stopped its shopping spree of AI companies; for example, their \$20 billion acquisition of Nuance spotlights their intention to go after helping automate and support the healthcare industry.

The era of hypercompetition

Corporations and governments around the world are building information infrastructure to prepare for a hypercompetitive world. Autonomous driving, 5G wireless networks, smart power grids, virtual

personal assistants, and virtual reality video games are some of the intelligent infrastructures seeing heavy AI investment. Recent advances in the field are propelling investments in these new technologies to stay competitive. The ability to embrace and leverage AI is already creating a competitive advantage for companies. Investors should look to companies that are building and utilizing these technologies to find growth opportunities.

Investing in the universe of AI

At ROBO Global, we recognized the robotics, automation, and artificial intelligence (RAAI) revolution was coming early on, becoming the first investment product to market in 2013 to capitalize on this technological era of epic proportions. In

**AI & machine learning
spending will grow from:**

\$70B
in 2020

to

\$365B
by 2025

monitoring the publicly traded universe of enablers of artificial intelligence over the past several years, we couldn't help but recognize the massive shift that was occurring. That is why we created the ROBO Global THNQ Index, the first investment index dedicated to delivering true exposure to the world of artificial intelligence.

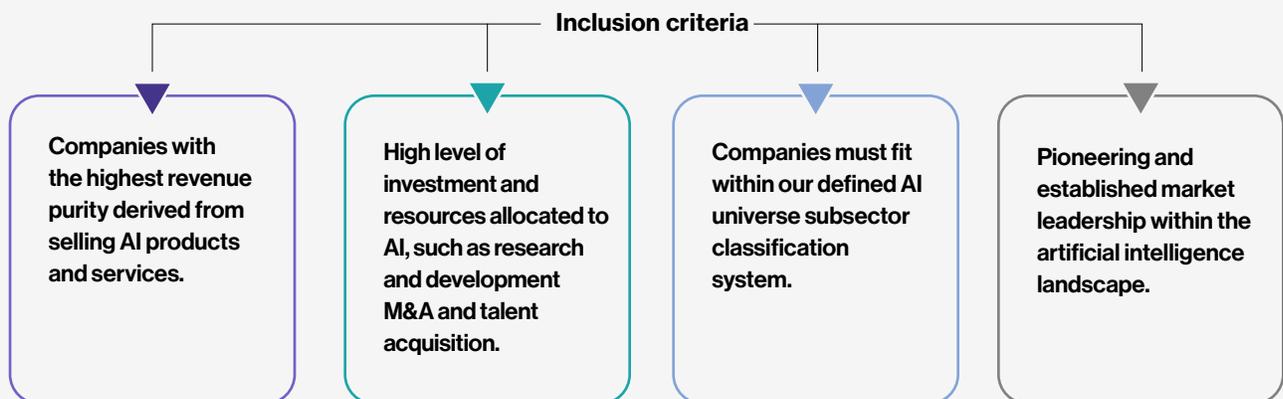
With the expertise of our leadership team and strategic advisors who are technologists and thought leaders in the field, we help investors capture the growth and return opportunities presented by this megatrend. Our indices are used by a variety of investment vehicles listed on multiple exchanges around the world.

Brought to you by the minds behind the original robotics and AI investment portfolio, ROBO Global is the creator of the ROBO Global Robotics & Automation Index series, which provides comprehensive, transparent, and diversified benchmarks representing the value chain of robotics, automation, and artificial intelligence.

Early adopters in digital transformation are already creating competitive advantages, and the gap with the laggards looks set to grow. For investors, the most important thing is to keep an eye on the end goal and gain broad exposure to the many different sectors set to grow thanks to AI in the coming years.

Differentiated strategy

At ROBO Global, we dug into AI technology, its history, and its many applications. Our research-driven approach leverages our deep technology expertise, industry relationships, and extensive experience identifying businesses leading the AI revolution.



Conclusion

There are many compelling arguments to invest in basket of global artificial intelligence stocks:

- Artificial Intelligence (AI) is poised to disrupt every company, organization, industry, and segment of the economy.
- To survive, just about every firm will need AI.
- AI is already impacting just about every industry. It is improving crop yields in agriculture, outperforming trained physicians in healthcare, and becoming an increasingly vital tool for most professionals.
- The rate of growth for AI adoption is already explosive and going to move even faster thanks to machine learning and deep learning.
- Corporations and governments are preparing for an era of hypercompetition and investing heavily in the technology that will make or break them: AI.
- Early adopters that embrace digital transformation will have competitive advantages and be the companies that will lead in the future.

To learn more about VettaFi Indexing click [here](#)

About VettaFi

VettaFi is a provider of indexing, data & analytics, industry leading conferences, and digital distribution services to ETF issuers and fund managers. It operates the ETFdb, Advisor Perspectives, and ETF Trends websites and the LOGICLY portfolio analytics platform – engaging millions of investors annually – empowering and educating the modern financial advisor and institutional investor. VettaFi owns and administers the ROBO Global Index Series. For more information, please visit: www.vettafi.com.

VettaFi LLC, is a wholly-owned subsidiary of TMX Group Limited (TMX Group). For more information about TMX Group, please visit: www.tmx.com.

vettafi.com | 1330 Avenue of the Americas, New York, NY 10019

VettaFi Disclaimer

This Document Is Impersonal and Not a Solicitation. ROBO Global, LLC is a wholly owned subsidiary of VettaFi LLC. VettaFi LLC, collectively with its affiliates and subsidiaries, is referred to herein as (“VettaFi”). This document does not constitute an offering of any security, product, or service. All information provided by VettaFi in this document is impersonal and not customized to the specific needs of any entity, person, or group of persons.

About the Index. The ROBO Global Artificial Intelligence Index (ticker: THNQ) is an AI stock index constructed with the goal of providing broad investment exposure to a basket of global AI stocks. THNQ includes companies actively developing and leveraging tools and AI-powered engines to capitalize on new market opportunities accelerate their revenue growth. The Index and its trademarked name are the exclusive property of VettaFi.

No Advisory Relationship. VettaFi is not a fiduciary or an investment advisor, and VettaFi makes no representation regarding the advisability of investing in any investment fund or other vehicle. This document should not be construed to provide advice of any kind, including, but not limited to, investment, tax or legal.

You Must Make Your Own Investment Decision. It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. You should not make a decision to invest in any investment fund or other vehicle based on the statements set forth in this document. You should only make an investment in an investment fund or other vehicle after carefully evaluating the risks

associated with such an investment in the investment fund, as detailed in the offering memorandum or similar document prepared by or on behalf of the issuer. This document does not contain, and does not purport to contain, the level of detail necessary to give sufficient basis to an investment decision. VettaFi does not sponsor, endorse, sell, promote, or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index.

No Warranties; Limitation of Liability. While VettaFi believes that the information contained in this document (collectively, the “Content”) is reliable, VettaFi does not guarantee the accuracy, completeness, timeliness, or availability of the Content in whole or in part. VettaFi is not responsible for any errors or omissions, regardless of the cause, in the Content which may change without notice. VettaFi makes no warranties, express or implied, as to results to be obtained from use of the Content, and VettaFi expressly disclaims all warranties of suitability with respect thereto. VettaFi shall not be liable for any claims or losses of any nature in connection with the use of the Content, including but not limited to, lost profits or punitive or consequential damages, even if VettaFi has been advised of the possibility of same.

Research May Not Be Current. This document has been prepared solely for informational purposes based on information generally available to the public from sources believed to be reliable. VettaFi does not assume any obligation to update the Content following publication in any form or format.