

Helping Enterprises Streamline AI Adoption for Real-World Applications and Effortless Innovation with TensorGo's Hyperspace Platform

The Hyperspace Platform, optimized with Intel® technology, empowers organizations to build, scale, and seamlessly integrate custom AI applications with existing infrastructure without the need for specialized data science expertise.

accelerated by **intel.**

About TensorGo

TensorGo is a pioneering force in shaping a smarter future through cutting-edge computer vision, natural language processing (NLP) and generative AI solutions. Their enterprise-ready platform, Hyperspace, integrates self-learning systems and data-powered models, revolutionizing industries and enhancing everyday life for their customers. With a commitment to innovation, TensorGo empowers businesses to scale up, streamline processes, and drive rapid transformation. Led by a team of passionate experts, they deliver customized solutions that stay ahead of technological progress, ensuring clients remain competitive in today's dynamic environment.

Unraveling the Complexity of AI Implementation

The great promise of artificial intelligence comes with new challenges for enterprises across industries trying to stay competitive. AI-enabled technologies can spur innovation and offer efficiency gains, but implementing these technologies is complex. Traditional AI implementations often come with significant costs, not only associated with specialized hardware like GPUs, but also with the personnel required to build and run these custom solutions. A small team of AI engineers can cost upwards of \$400,000 annually in technology development costs alone,¹ and smaller enterprises often lack the capital for such cost-intensive and specialized investment.

Even with proper resourcing, achieving optimal performance remains a challenge, especially for real-time applications. AI solutions can experience difficulties processing large volumes of data efficiently, leading to delayed results and reduced effectiveness in dynamic environments. Data privacy and security are also paramount concerns, with businesses needing to ensure sensitive information is protected throughout the AI lifecycle. From data collection and storage to processing and analysis, every stage necessitates robust security measures to prevent unauthorized access, breaches, and misuse of data.

Amidst these challenges, there's a growing demand for comprehensive AI platforms that offer cost-effective solutions, streamlined workflows, and robust security measures. Enter the TensorGo Hyperspace Platform, designed to empower businesses to overcome these hurdles by offering a holistic approach to AI development and deployment. TensorGo addresses key challenges to AI adoption faced by businesses of all sizes, enabling them to build, scale, and integrate custom AI applications with ease.

Accelerating AI Adoption with the Hyperspace Platform

The TensorGo Hyperspace Platform is a pioneering solution that revolutionizes AI deployment for businesses. It offers a user-friendly interface and intuitive tools, democratizing AI and making it accessible to organizations of all sizes and levels of expertise. Leveraging a library of pre-trained AI models that spans domains like natural language processing, computer vision, and predictive analytics, businesses can easily customize solutions to their specific needs without requiring specialized data science talent.

Hyperspace offers seamless integration with existing infrastructure and Internet of things (IoT) devices, enabling real-time inferencing and actionable insights. Its scalable architecture accommodates evolving business needs, while its integration with Intel technologies, including the OpenVINO™ toolkit and Intel® Xeon® Scalable processors, allows optimized performance and cost efficiency. Through this collaboration, Hyperspace delivers exceptional value, empowering organizations to drive innovation and unlock new opportunities with AI-driven business transformation.

From Edge to Cloud: How the Solution Works

The TensorGo Hyperspace Platform operates seamlessly across edge and cloud environments, harnessing the power of AI to equip users with transformative insights and advanced capabilities.

At the edge, selected AI models are deployed on IoT devices such as Raspberry Pi 4 and devices based on Intel® Celeron® 6305E processors. Metadata is streamed to the platform via an API, where advanced analytics are performed to extract insights.

Processing data at the edge reduces latency and provides faster inferencing directly at the point of data collection without relying on centralized infrastructure. This enables near real-time data analysis and facilitates rapid decision-making to help organizations respond quickly to changing conditions.

In the cloud, the platform efficiently processes both audio and video data, leveraging a dedicated media server for comprehensive analytics. This streamlines the handling of large volumes of media data. The media is served via a real-time messaging protocol (RTMP) stream to the video and audio analytics application, which leverages the OpenVINO toolkit inference engine to accelerate the inferencing process on Intel® CPU hardware.

The raw metadata generated from the analytics is further processed and stored in a time series database for analysis and visualization in a central dashboard. This hybrid cloud-edge architecture provides more efficient and distributed processing of media data, leveraging the cloud for computationally intensive tasks while enabling on-premise inferencing at the edge for low-latency applications. By seamlessly integrating edge and cloud capabilities, the Hyperspace Platform empowers organizations to gain the full potential of AI across their infrastructure.

Key Features



Library of Pre-Trained AI Models:

Access a diverse range of pre-trained AI models across domains such as natural language processing, computer vision, and predictive analytics for rapid deployment without extensive training data or expertise.



Customization Without Specialized Expertise:

Easily tailor AI models to specific use cases with intuitive tools and workflows that streamline the customization process, even without specialized data science skills.



Multimodal Analytics:

Simultaneously analyze audio and video data for comprehensive insights and enhanced decision making.



Higher Accuracy:

Benefit from improved precision in AI model predictions, for more reliable results and effective decision support.



Scalable Analytics Engine:

Handle large volumes of data and scale AI workloads with an enterprise-grade analytics engine.



Flexibility in Deployment Options:

Choose between on-premises or cloud deployment to align with infrastructure, security, and compliance needs.

End Customer Benefits



Effortless Integration: TensorGo's Hyperspace Platform offers seamless integration with existing systems and infrastructure, minimizing disruption to workflows. This effortless integration ensures a smooth transition to AI-powered solutions without significant changes to the organization's operations.



Democratized AI: With an intuitive interface and user-friendly tools, TensorGo democratizes AI, making it accessible to users across the organization, regardless of technical expertise. This democratization enables broader participation in AI initiatives and empowers teams to drive innovation and problem-solving.



Practical Innovation: TensorGo delivers practical innovation by streamlining operations and improving decision-making processes that lead to enhanced customer experiences. By leveraging AI capabilities, organizations can automate repetitive tasks, uncover actionable insights from data, and deliver personalized experiences to customers, driving tangible business outcomes.



Tailored Solutions: TensorGo enables organizations to create customized AI solutions tailored to their specific needs and objectives. Whether addressing industry-specific challenges or solving unique business problems, the platform provides the flexibility and customization capabilities required to deliver solutions that align with the organization's goals and priorities.



Trusted Guidance: With dedicated support and expert guidance, TensorGo ensures that organizations maximize the value of their AI investments. From initial implementation to ongoing optimization, the platform's support team offers assistance and insights to help organizations navigate the complexities of AI adoption and achieve their desired outcomes.

These key benefits empower organizations to realize the full potential of AI, driving efficiency, innovation, and growth in today's competitive business environment.

Customer Success Story: Optimizing Animation Development with TensorGo

Challenge: One of India's prominent animation studios sought to enhance its development and production pipeline to stay competitive in the entertainment industry. Facing challenges with traditional and time-consuming methods of producing content, the studio aimed to transition into an AI-centric organization to stay at the forefront of innovation and improve their workflow efficiency.

Solution: TensorGo partnered with the animation studio to implement AI-powered tools tailored to their specific needs. Utilizing the platform's library of pre-trained AI models, TensorGo introduced AI-driven rotoscoping, voice dubbing, and SD (4:3) to HD (16:9) conversion solutions to optimize production processes. These tools streamlined traditional workflows, automated tedious tasks, and enabled the studio to achieve unprecedented levels of efficiency and quality in content creation.

Result: The implementation of the Hyperspace Platform yielded remarkable results for the animation studio:



The AI-powered rotoscoping tool delivered a staggering 98.67% speed boost.²



The studio realized 95.83% cost savings by completing tasks in days instead of months.²



The SD (4:3) to HD (16:9) solution accelerated work speed by 10X and increased output by 90%.²

With TensorGo's help, the animation studio transformed into an AI-centric organization, equipped to meet the demands of the modern entertainment industry.

2. Results generated by internal TensorGo deployment analysis with customer. Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

How Intel® Technology Enhances the Hyperspace Platform

The TensorGo Hyperspace Platform maximizes AI performance and scalability through integration with Intel technologies. TensorGo fine-tuned its models for deployment utilizing the OpenVINO™ toolkit, an open-source software kit designed to accelerate the development and deployment of high-performance computer vision and deep learning inference applications. Specifically, the model optimizer tool enabled seamless conversion and optimization of models for deployment on Intel® hardware. TensorGo also utilized the benchmark tool provided by the OpenVINO toolkit to estimate performance improvements, to make sure desired enhancements in efficiency and speed were achieved. In addition, this use of the OpenVINO toolkit enabled TensorGo to automatically leverage the advantages of Intel® Xeon® processors without additional development.

Intel Xeon processors, a family of high-performance CPUs including models like the Intel® Xeon® Gold processor and the Intel® Xeon® Platinum processor, are optimized for handling demanding workloads and play a pivotal role in bolstering the platform's capabilities. These processors accelerate inferencing processes, offering more efficient and rapid data processing within the Hyperspace Platform. By harnessing the power and performance of Intel Xeon processors, TensorGo delivers reliable and high-performance AI inferencing, enabling real-time insights that create transformative outcomes for their users.

This collaboration with Intel empowers TensorGo to deliver an optimized solution that meets the evolving demands of their users. By leveraging the advanced capabilities of Intel technologies, TensorGo provides organizations with enhanced performance, scalability, and efficiency in AI deployment across various industries and applications.

Conclusion

With AI adoption becoming ubiquitous across industries, the TensorGo Hyperspace Platform represents a clear path forward for businesses looking to capitalize on the benefits of AI-driven solutions. Through its intuitive interface, customizable solutions, scalability, and integration with Intel technologies, TensorGo helps organizations of all sizes harness the power of AI. Addressing key challenges like cost efficiency, accessibility, and data security, TensorGo paves the way for practical innovation and positive business outcomes. As organizations navigate the pursuit of AI adoption, TensorGo is committed to assisting users each step of the way. They ensure customers receive the support they need to maximize the value of their AI investments and achieve their unique objectives. With TensorGo, the future of AI is not just a vision—it's a reality waiting to be realized.

To learn more about getting started with TensorGo's Hyperspace Platform, visit their [website](#) and contact info@tensorgo.com to connect with a professional today!



Learn More

To learn more about the TensorGo Hyperspace Platform visit:

- [TensorGo Website](#)
- [TensorGo YouTube Channel](#)
- [TensorGo Vision Gallery](#)

To learn about Intel technologies visit:

- [Intel® Xeon® Scalable processors](#)
- [OpenVINO™ toolkit](#)



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With Intel technologies and capabilities, a vendor's optimized offering can go beyond the traditional compute and extend to accelerated networking, storage, edge, and cloud. It's all part of helping customers build an optimized infrastructure across the company.

Sources

1. [Cost of AI in 2024: Estimating Development & Deployment Expenses](#), Akkio, 2024.
2. Results generated by internal TensorGo deployment analysis with customer. Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

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