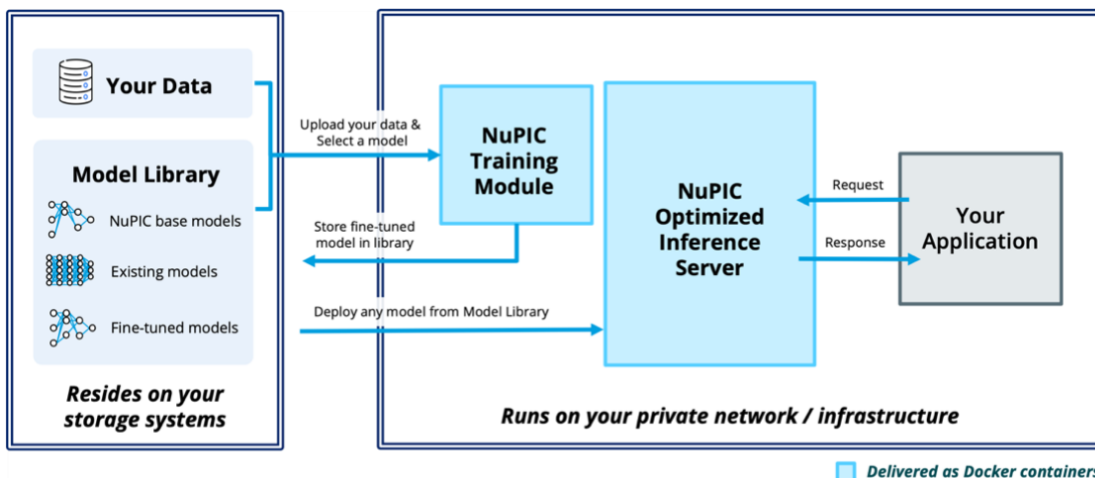


# Numenta Platform for Intelligent Computing (NuPIC™)

NuPIC™ is an AI software platform that draws on Numenta's decades of neuroscience research to enable the deployment of Large Language Models (LLMs) on CPUs with simplicity, scalability, and speed. NuPIC comes with a highly optimized inference server and production-ready pretrained models that can be customized to specific NLP use cases. Deployed as Docker containers, NuPIC operates entirely within a customer's infrastructure, ensuring improved data security, reduced latency, lower costs, and easier compliance. It is designed to allow any developer to get up and running easily, making it an ideal solution for LLM deployment.

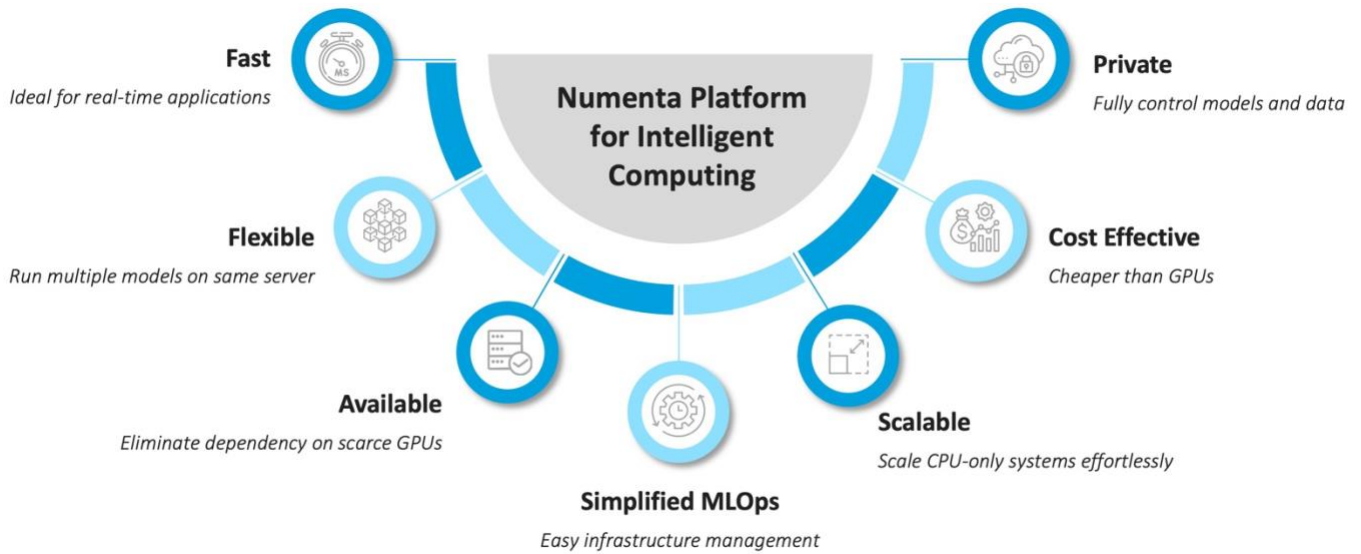


Use Case	Description	Applications
Sentence Similarity	Compare semantic similarities between different sentences and how they relate to each other.	Contract analysis, recommendation systems, plagiarism detection, etc.
Document Classification	Sort and categorize documents into predefined groups based on different subject matters.	Organizing large datasets, email filtering, content management, etc.
Sentiment Analysis	Analyze opinions or emotions within text and classify as positive, neutral, or negative.	Market research, social media monitoring, customer feedback analysis, etc.
Question-Answer	Provide accurate responses to user queries based on a knowledge base or previous interactions.	Automated chatbot responses, technical support, information systems, etc.
Retrieval Augmented Generation	Enhance text generation by retrieving and summarizing relevant data from a database.	Market analysis, customer service enhancement, resource integration etc.
Named Entity Recognition	Detect and classify named entities in text, such as organizations, locations, and dates.	Location detection, business intelligence, legal document analysis, etc.
Summarization	Condense lengthy documents and articles into concise, informative summaries.	Information retrieval, customer support, content curation, etc.
Language Translation	Break down language barriers in real time for global operations.	Multilingual customer support, e-commerce, product localization, etc.

## EXAMPLE IMPLEMENTATION

A business with thousands of daily customer inquiries can use NuPIC BERT models for general inquiries to automate accurate, context-aware responses to common questions such as “Where is my order?” or “How do I return this item?” They can also use sentiment analysis to categorize inquiries based on emotional tone, where escalations can then be directed to the relevant support staff. Subsequently, NuPIC GPT models can provide the Operations team with brief summaries of flagged tickets, allowing them to focus on complex cases and streamline customer support.

## BENEFITS



## TECHNICAL CONFIGURATIONS

<b>Models:</b>	NuPIC BERT, NuPIC GPT (similar to LLAMA2)	<b>Operating System:</b>	Recent version of Linux (Ubuntu 22.04) is required to ensure kernel support for AMX
<b>Minimum Processor:</b>	Any Intel-compatible server with AVX512/AVX2/AMX instruction set support	<b>Software:</b>	Docker, Python 3.8 or later
<b>Recommended Processor:</b>	AMX enabled server such as AWS m7i.4xlarge	<b>Training:</b>	GPU with at least 12GB RAM
<b>Memory &amp; Storage:</b>	16GB RAM, 200GB of storage space		

## GET STARTED TODAY

Discover the power of leveraging LLMs with NuPIC. Contact us for a demo to discuss how we can tailor our solutions to meet your business needs: [numenta.com/demo](https://numenta.com/demo)



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Numenta has defined unique brain-based algorithms, data structures, and architectures that form the backbone of its flagship product – the Numenta Platform for Intelligent Computing (NuPIC). These innovations not only deliver disruptive performance enhancements in today’s AI systems but also create a roadmap to truly intelligent systems. Trusted by Global 100 companies, NuPIC makes AI accessible and enables entirely new categories of applications across the full spectrum of AI.