



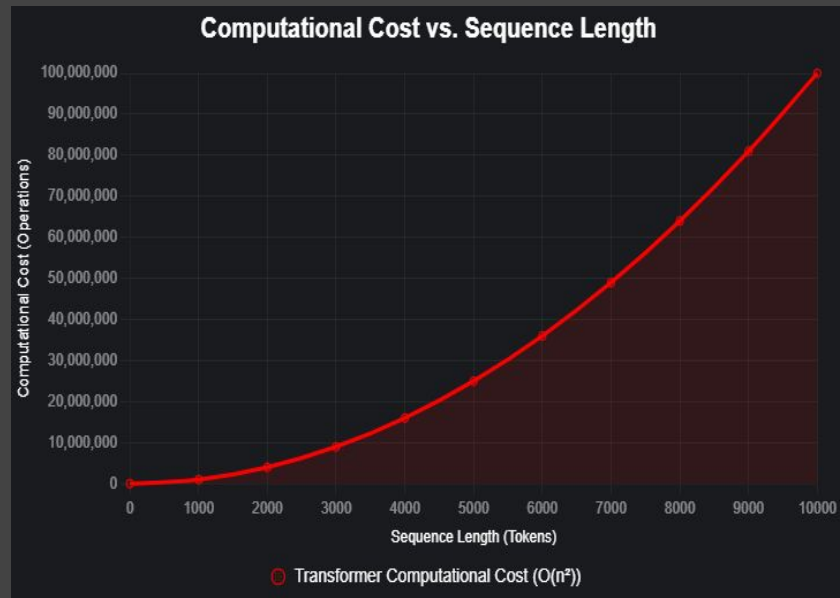
# HighNoon LLM: Revolutionizing Sequence Processing

A Breakthrough in Hierarchical Spatial Neural Memory

Verso Industries, May 2025  
Presented By: Michael Zimmerman

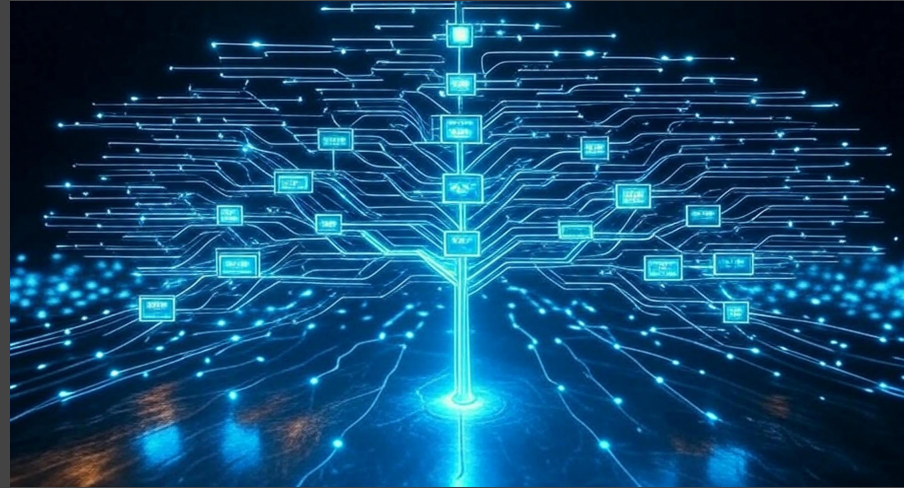
# The Inefficiency of Current AI Models

- Standard transformers suffer from quadratic complexity ( $O(n^2)$ ), causing high computational and memory costs for long sequences.
- This inefficiency limits scalability for tasks like document translation, long-form summarization, and extended-context AI.
- Transformers also fail to explicitly capture hierarchical dependencies (e.g., phrases within sentences).



# HighNoon LLM with HSMN

- Introduces Hierarchical Spatial Neural Memory (HSMN), reducing complexity to  $O(n \cdot c)$ .
- Explicitly models hierarchical structures for better efficiency and accuracy.
- Enables faster, cheaper processing of long sequences, unlocking new possibilities in AI.



# HSMN Architecture Simplified

1. **ChunkEncoder**: Breaks sequences into manageable chunks (e.g., size 128) and encodes them.
2. **Aggregator**: Builds a binary memory tree by combining chunk embeddings hierarchically.
3. **ReasoningModule**: Generates output by attending to the memory tree, preserving context.

Output  $\leftarrow$  Memory Tree  $\leftarrow$  Chunk 1, Chunk 2, Chunk 3

# Why HighNoon LLM Stands Out

**Efficiency:** Reduces computational complexity from  $O(n^2)$  to  $O(n \cdot c)$ , where  $c$  is chunk size.

**Hierarchical Mastery:** Explicitly models nested structures, outperforming transformers in tasks like parsing and semantic analysis.

**Continual Learning:** Employs Elastic Weight Consolidation (EWC) to adapt across tasks without catastrophic forgetting.

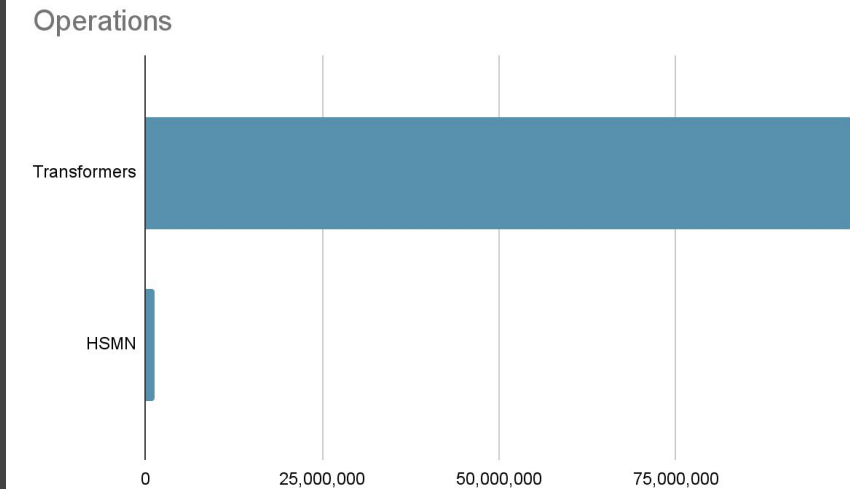
Model	Encoder Complexity	Hierarchical Modeling
Transformer	$O(n^2)$	Implicit
Longformer	$O(n \cdot k)$	Implicit
HSMN	$O(n \cdot c)$	Explicit

# Unmatched Efficiency

For a 10,000-token sequence:

- Standard Transformer: 100 million operations ( $O(n^2)$ ).
- HSMN (chunk size=128): 1.28 million operations ( $O(n \cdot 128)$ ).

Result: 78x reduction in computational load.



# A \$43 Billion Market Awaits

- NLP market projected to reach \$43 billion by 2025 (21% CAGR).
- Target segments: Tech firms, SaaS platforms, enterprises, and AI solutions.
- HighNoon LLM is poised to capture this with efficient, local processing.

# What Sets HighNoon LLM Apart

- Efficiency:  $O(n \cdot c)$  complexity vs.  $O(n^2)$ .
- Hierarchical Mastery: Captures nested structures natively.
- Local Processing: Runs on-device for privacy and cost savings.
- Continual Learning: Adapts without forgetting past knowledge.



# Transforming Industries

- Document-Level Translation
- Long-Form Summarization
- Code Generation
- Conversational AI

# Simple and Scalable Revenue

- Users buy and download HighNoon LLM for unlimited local use, one license covers 1 device and user.
- No cloud dependency ensures privacy and eliminates recurring costs.
- Revenue via direct model sales to developers, businesses, and individuals.

# Path to Market

- Q2 2025: Finalize training and validate benchmarks.
- Q3 2025: Launch for developers and early adopters.
- Q4 2025: Secure strategic partnerships.
- Q1 2026: Expand globally.

# Standing Out in the Crowd

- Competes with ChatGPT, Claude, Gemini, etc.
- Key Advantages: Superior efficiency, local processing, hierarchical modeling.

# Our Visionary Team

- Michael Zimmerman: Founder & CEO, Ai Innovation, Software Engineering, Startup Businesses
- Jacob Godina: President & Founder, Marketing, Software
- TBD
- TBD

# Fueling the Future

- Funding Needed: \$15M

## Use of Funds:

- Training Infrastructure: Localized GPU clusters.
- Talent: Hire AI researchers and engineers.
- Development: Build local APIs and SDKs.
- Go-to-Market: Marketing and partnerships.

# Milestones to Success

- Q2 2025: Training complete, benchmarks validated.
- Q3 2025: Developer launch.
- Q4 2025: Strategic partnerships secured.
- Q1 2026: Global rollout begins.

# Join the AI Revolution

Invest in HighNoon LLM to lead the next wave of efficient AI.

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Let's build the future of sequence processing together.