

Nomad AI

nomadai.ca

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White Paper - Version 1

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1 Introduction

This white paper provides a high-level explanation of a novel AI model we have developed, and is meant to be a starting point for further discussion.

The paper is intended for a general audience, and does not require a technical background.

Proprietary information is not disclosed in this document; however, we are glad to discuss our technology in more detail with interested parties.

2 Problem

AI models rely on large amounts of high-quality data to train and perform, which come at a cost. Currently, AI models that work well on smaller datasets struggle in scaling up to larger datasets or real-time applications. These model-specific challenges require continual upkeep of appropriate architecture, regularization, and optimization algorithms.

Most prevalent AI models available today require vast storage and computational power, which limit the AI to cloud and internet connectivity in order to run large language models (LLM) like chatGPT. Classic neural networks require billions of artificial neurons and parameters to run an LLM, which introduces the issue of causality making it difficult to understand how the AI model arrives at a decision. Although some of these issues can be mitigated through a combination of specific transformers, the issues are intrinsic to the architecture of the models.

We believe that these limitations stem from the fact that these models employ terms such as "neurons" and "neural network", yet these referenced "neurons" do not function like those in natural biology.

3 Solution

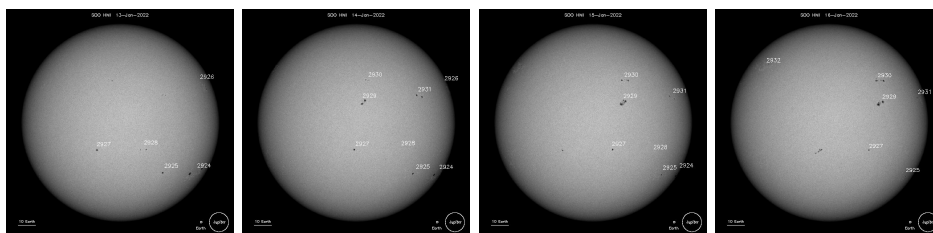
Nomad mirrors the functionality of real neurology, unlike the transformers, which are used in other deep learning AI architectures. By employing certain phenomena locked within natural structures, Nomad possesses a unique solution to the challenges posed by conventional AI models.

Like the connecting synapses in our brain, Nomad has the ability to adapt, scalability of datasets become a possibility with minimal drawback. It is because of this adaptability Nomad can learn from its changing environment without the need for complete AI retraining.

4 Applications

Spatial recognition is an important building block of any intelligence. Our initial proof of concept comprises a recall and recognition application. To confirm our candidate for a new AI, we used a decade's worth of Sunspot images. It is important to note that Sunspots are unique and random in size and location of the Sun. We verified Nomad's capability of total recollection and recognition of each one of the distinct images.

Below are some example photos that Nomad was able to identify after examining the Sun for years.



Essentially, Nomad has acquired the ability to recall images and recognize patterns from memory, while employing mechanisms similar to those used in human neurology.

Achieving this milestone is significant because it lays the foundation for better machine learning, and increases the capacity to identify new events

or patterns from which to make inferences from. More precisely, Nomad can form conclusions from new events based on new evidence and reasoning.

There are more applications for Nomad, if you're interested in discussing possible use cases, please reach out to us via the contact form at <https://nomadai.ca>.

5 Summary

With advanced AIs in the marketplace, businesses can leverage AI as a tool to enhance their operations, uncover hidden insights, and gain an advantage over the competition.

Whether it involves retaining or acquiring new customers, planning strategies to hold a niche market, or validating an approach to enter a new market, AI is here to provide assistance.

Mainstream AIs come with drawbacks, such as:

- power computation with storage limitations for large language models
- AI portability is bound to large cloud centers
- obscure causality insight into the decisions made by the AI model
- expensive retraining to accommodate unknown events.

Nomad differs from other AIs because its malleability preserves the fundamental trait of natural neurology. This foundational approach will allow Nomad to have scalable datasets, portability with less dependence on internet connectivity, and clear insights to decision making.

All systems have their strengths and weaknesses, their perfections and imperfections. The key is in finding the simplest solution to your problem.

Indeed, all solutions are simple after you've discovered them.