Leena AI WorkLM™

A Next-Generation Language Model for Workplace Automation

Executive Summary

In today's data-driven landscape, the importance of sophisticated language processing capabilities is paramount. From AI customer support to personalized content generation, these capabilities form the backbone of several emergent technologies. This white paper introduces WorkLM™, a ground-breaking large language model (LLM) developed by Leena AI, intended to revolutionize how we fundamentally get work done. Leveraging the Qwen architecture, 7 billion parameters , and 2TB of proprietary data gathered over seven years, WorkLM™ offers unparalleled potential for business operations.

Introduction

Leena AI, a frontrunner in AI-powered workplace solutions, is proud to present WorkLM™, an innovative LLM crafted specifically for the modern workplace. This state-of-the-art solution signifies Leena AI's dedication to supplying businesses with the tools required to optimize efficiency, streamline processes, and fully harness the vast volumes of unstructured text data they produce daily.

Built on the robust Llama framework, WorkLM™ stands out with its remarkable ability to comprehend, process, and generate text. This capability stems from its 7 billion parameters and the broad 2TB dataset.

Technology Overview

Llama Backbone

WorkLM™ extends the Llama, a breakthrough language model architecture. The Llama backbone provides WorkLM™ with an advanced predictive text generation capability, producing human-like responses in given contexts. The harmonization of a substantial parameter count and predictive capacity makes WorkLM™ a versatile tool for a plethora of tasks, from auto-completing emails to creating in-depth reports.

7B Parameters

Parameters in machine learning models denote the model's learning capacity from data. With a substantial 'brain capacity' of 7 billion parameters, WorkLM™ is designed to understand and produce intricate text. This large parameter count enables WorkLM™ to discern the fine nuances of language, generate high-quality responses, and adapt to a wide variety of contexts.

Proprietary Data

The power of WorkLM™ resides in its unique training dataset. This dataset, composed of 2TB of proprietary data, has been carefully collected and curated by Leena AI over the past seven years. The data, comprising anonymized and encrypted business-related texts, imparts WorkLM™ with a comprehensive grasp of business language and contexts.

Model Training

Training WorkLM™ involves three crucial stages, each designed to enhance specific capabilities of the model:

1. Pre-training: The primary objective of pre-training is to empower the model to predict the next word in a series of words. This is achieved by creating a base language model using our proprietary data, which includes policies, sentiment analysis, policy intents and utterances from our NLP algorithms, and open-source data. All this data is domain-specific, ensuring that WorkLM™ has an in-depth understanding of business language and contexts.
2. Supervised fine-tuning: The purpose of supervised fine-tuning is to guarantee that the model understands and responds to instructions. For example, if the model is instructed to add a set of numbers (2+2), instead of predicting the next words, it will wait for the instruction to be completed and then perform the action. This training is conducted on a general public dataset.
3. Reward model: The next stage of training is designed to ensure that the model's responses align with human expectations. A reward model is developed to determine the optimal response to a human query. This stage of training is also performed on a public dataset.

WorkLM™ Performance

Comparison with OpenAI GPT-3.5 Turbo

When considering enterprise tasks like automating helpdesk tickets, answering employee questions, creating integrations, publishing business intelligence, and automating tasks, WorkLM™ outperforms OpenAI GPT-3.5 Turbo significantly. On the other hand, OpenAI GPT-3.5 Turbo achieves a slightly better Elo score of 1155 for generic assistant tasks, such as general text generation and summarization tasks. However, WorkLM™ maintains a competitive edge with a solid Elo score of 1148, showcasing its proficient performance in these generic tasks as well.

Security and Data Privacy

Leena AI is staunch in its commitment to maintaining the highest standards of security and data privacy. WorkLM™ is developed using data that Leena AI has collected from enterprises over the past seven years. Crucially, WorkLM™ does not rely on any third-party LLMs. Although the Leena AI team can cater to requests to utilize services such as third-party APIs if a customer desires. By default, WorkLM™ operates independently of any third-party services.

Our commitment extends to the usage of customer data, which is not used directly to train the LLM. All data used for training is thoroughly anonymized and masked, and a stringent double-check for any personally identifiable information (PII) is carried out before it is used for training purposes. This approach ensures that while WorkLM™ benefits from a rich and diverse training dataset, the privacy and security of client data are never compromised.

Applications of WorkLM™

WorkLM™ is designed to serve as a potent tool to automate and optimize various tasks in businesses. Key applications include:

1. Intelligent Virtual Assistant: WorkLM™ can underpin an intelligent virtual assistant capable of understanding and executing complex tasks, managing multi-turn conversations, and providing real-time information.
2. Handling Complex Commands Across Multiple Systems: WorkLM™ can interpret and execute complex commands across multiple systems and knowledge sources, intelligently building workflows on-the-fly to streamline operations.

3. Identifying Knowledge Gaps & Creating Knowledge: WorkLM™ can identify knowledge gaps within an organization and generate knowledge from existing non-standard sources, such as ticket resolutions and emails.
4. Intelligent Robotic Process Automation (RPA): WorkLM™, integrated with RPA, can enhance efficiency and effectiveness by understanding and automating routine tasks.
5. Business Intelligence from Enterprise Data: WorkLM™ can analyze extensive enterprise data to provide actionable business intelligence, facilitating data-driven decisions.
6. Helpdesk Intelligence: WorkLM™ can enhance the capabilities of a helpdesk by providing accurate responses and solutions to a wide array of queries and issues, thereby reducing resolution times and improving customer satisfaction.
7. Text Analysis: WorkLM™ can mine insights from large volumes of text data, performing tasks such as identifying trends, sentiment analysis, or extracting specific information.
8. Email Auto-completion: WorkLM™ can provide contextually relevant suggestions for email drafting, improving communication efficiency.
9. Document Generation: WorkLM™ can generate reports, meeting minutes, and other types of documents based on specific requirements, translating complex instructions into high-quality, human-like text.
10. Human-like Autonomous Agents: WorkLM™ can drive autonomous agents that handle a variety of low-value tasks within an enterprise, freeing human resources for more strategic endeavors.

Conclusion

In conclusion, WorkLM™ symbolizes a leap forward in the application of AI within the workplace. It harnesses the power of advanced NLP techniques and extensive training data to provide businesses with an intelligent, adaptable, and effective tool for various use cases. This white paper is a stepping stone into the future of work - a future where AI-powered solutions, such as WorkLM™, play a pivotal role in fostering successful, efficient, and innovative business operations.

Ready to experience the transformative power of WorkLM™?
CTA: Schedule a demo today