

## **Title: The Next Decade in AI: Four Steps Towards Robust Artificial Intelligence**

Gary Marcus's "The Next Decade in AI" offers a futuristic blueprint for the future of artificial intelligence. This study serves as a convincing mandate, emphasizing the critical need for AI systems to be capable of common-sense thinking. It delves into four critical steps toward establishing strong AI, an area in which NLP plays a critical role.

Gary Marcus' work acts as a synapse, linking to and expanding on fundamental AI principles and research. It digs into the integration of symbolic and statistical methodologies, which is analogous to teaching AI to grasp language, context, and meaning. The paper sits on the shoulders of AI giants such as the BERT and GPT models, which have improved NLP capabilities.

The study emphasizes the magnificent growth of AI technology, including NLP, but also the continuing hurdles it faces. Notably, the core of the work centers on the subject of common-sense thinking, which is frequently eluded by present AI systems. Because of their lack of human-like common sense, these systems frequently find themselves in "dark alleys" of misunderstanding, emphasizing the essential nature of the issues at hand.

In the environment of NLP, the absence of common sense in AI remains a massive difficulty, resulting in confusing blunders like AI fumbling through discussions. While intriguing, the suggested merging of symbolic and statistical techniques in AI necessitates a complex neural network dance. Ensuring transparency and interpretability in NLP-powered AI systems is a difficult and time-consuming endeavor. Furthermore, developing commonsense knowledge in AI, reflecting a broad array of ordinary facts and concepts, is analogous to teaching a toddler about the world, but on a massive scale.

I propose an ambitious research strategy to address these mammoth difficulties in NLP and AI. We will go through neural network paths, bridging the gap between symbolic and statistical AI techniques, with a particular emphasis on NLP models. My vision includes pioneering methodologies that train AI systems to recognize complex context and instill common-sense thinking, culminating in AI systems that understand and respond to language with the grace of a person.

"The Next Decade in AI" by Gary Marcus is a call to arms in the fabric of AI and NLP, an invitation to start on a quest to shape AI into a mirror of human intellect. These proposed principles, as well as our collaborative research strategy, carry the torch that can blaze the route forward, resulting in AI systems that are not just strong, but also enlightened, resonating with human understanding. As NLP evolves and adapts, it will play an important role in accomplishing these goals, ushering AI into a new era of dependable, intuitive, and trustworthy technologies that will serve as partners in our human pursuits.