FINXTER — OpenAI Glossary Cheat Sheet — 🧑‍💻 OpenAI

Artificial General Intelligence (AGI): AGI refers to a hypothetical AI that can perform any intellectual task a human being can do, demonstrating human-like cognitive abilities across diverse domains.

Singularity: A theoretical point in the future when AI advancements lead to rapid, uncontrollable, and transformative changes in society, potentially surpassing human comprehension.

AI Safety: AI safety is the study and practice of building AI systems that operate securely and align with human values, ensuring that they benefit humanity without causing harm.

Alignment Problem: The alignment problem is the challenge of designing AI systems that understand and act upon human intentions, values, and goals, rather than optimizing for unintended objectives.

OpenAI: OpenAI is an AI research organization that focuses on developing artificial general intelligence (AGI) that benefits everybody.

Deep Learning: Deep learning is a subfield of machine learning that uses artificial neural networks to model complex patterns and make predictions or decisions based on input data.

Artificial Neural Network: An artificial neural network is a computational model inspired by the human brain's structure and function, consisting of interconnected nodes called neurons that process and transmit information.

Supervised Learning: Supervised learning is a machine learning approach where a model is trained on a dataset containing input-output pairs, learning to predict outputs based on new inputs.

Unsupervised Learning: Unsupervised learning is a machine learning approach where a model learns patterns and structures within input data without explicit output labels, often through clustering or dimensionality reduction.

Reinforcement Learning from Human Feedback (RLHF): RLHF is a method that combines reinforcement learning with human feedback, allowing AI models to learn from and adapt to human preferences and values.

Natural Language Processing (NLP): NLP is a field of AI that focuses on enabling computers to understand, interpret, and generate human language.

Large Language Models: Large language models are AI models trained on vast amounts of text data, capable of understanding and generating human-like text.

Transformer: The Transformer is a deep learning architecture designed for sequence-to-sequence tasks, known for its self-attention mechanism that helps capture long-range dependencies in data.

Attention mechanism: Attention mechanisms in neural networks enable models to weigh the importance of different input elements relative to one another, improving their ability to capture context.

Self-attention: Self-attention is a type of attention mechanism used in transformers that allows the model to relate different positions of a single sequence.

BERT (Bidirectional Encoder Representations from Transformers): BERT is a pre-trained transformer-based model developed by Google for natural language understanding tasks, which can be fine-tuned for specific applications.

GPT (Generative Pre-trained Transformer): GPT is a series of AI models developed by OpenAI, designed for natural language processing tasks and capable of generating coherent, contextually relevant text.

GPT-3.5: GPT-3.5 is an intermediate version of the GPT series, bridging the gap between GPT-3 and GPT-4 in terms of model size and capabilities.

GPT-4: GPT-4 is a hypothetical, more advanced version of the GPT series, expected to have larger model size and enhanced capabilities compared to its predecessors.

Pre-training: Pre-training is the initial phase of training a deep learning model on a large dataset, often unsupervised

Fine-tuning: Fine-tuning is the process of adapting a pre-trained model for a specific task by training it on labeled data related to that task, refining its performance.

Zero-shot learning: Zero-shot learning is a machine learning approach where a model can make predictions or complete tasks without being explicitly trained on that task's data.

Few-shot learning: Few-shot learning is a machine learning approach where a model can quickly adapt to new tasks by learning from a small number of labeled examples.

Token: A token is a unit of text, such as a word or subword, that serves as input to a language model.

Tokenizer: A tokenizer is a tool that breaks down text into individual tokens for processing by a language model.

Context window: The context window is the maximum number of tokens that a language model can process in a single pass, determining its ability to capture context in input data.

Prompts: Prompts are input text given to a language model to generate a response or complete a specific task.

Prompt Engineering: Prompt engineering is the process of designing effective prompts to elicit desired responses from language models, improving their utility and reliability.

ChatGPT: ChatGPT is a conversational AI model developed by OpenAI based on the GPT architecture, designed to generate human-like responses in text-based conversations.

InstructGPT: InstructGPT is an AI model developed by OpenAI, designed to follow instructions given in prompts, enabling it to generate more task-specific and accurate responses.

OpenAI API: The OpenAI API is a service provided by OpenAI that allows developers to access and utilize their AI models, such as ChatGPT, for various applications.

DALL-E: DALL-E is an AI model developed by OpenAI that generates images from textual descriptions, combining natural language understanding with image generation capabilities.

LaMDA: LaMDA is Google's conversational AI model designed to engage in open-domain conversations, understanding and generating responses for a wide range of topics.

Midjourney: Midjourney refers to an intermediate point in the development of AI technologies, signifying progress made while acknowledging that there is still much to be achieved.

Stable diffusion: Stable diffusion is a research area focused on improving the training of large-scale AI models by introducing stability and controllability during the diffusion process.

Diffusion models: Diffusion models are a class of models that represent the spread of information, influence, or other phenomena through a network.

Backpropagation: Backpropagation is a widely-used optimization algorithm in neural networks that minimizes the error between predicted outputs and true outputs by adjusting the model's weights.