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Fate/Zero: Fusing Attentions for Zero-shot Text-based Video Editing

Evaluating GPT-4 and ChatGPT on Japanese Medical Licensing Examinations

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Abstract

As large language models (LLMs) gain popularity among speakers of diverse languages, we believe that it is crucial to benchmark them to better understand model behaviors, failures, and limitations in languages beyond English. In this work, we evaluate LLM APIs (ChatGPT, GPT-3, and GPT-4) on the Japanese national medical licensing examinations from the past five years. Our team comprises native Japanese-speaking NLP researchers and a practicing cardiologist based in Japan. Our experiments show that GPT-4 outperforms ChatGPT and GPT-3 and passes all five years of the exams, highlighting LLMs' potential in a language that is typologically distant from English. However, our evaluation also exposes critical limitations of the current LLM APIs. First, LLMs sometimes select *prohibited choices* (禁忌肢) that should be strictly avoided in medical practice in Japan, such as suggesting euthanasia. Further, our analysis shows that the API costs are generally higher and the maximum context size is smaller for Japanese because of the way non-Latin scripts are currently tokenized in the pipeline. We release our benchmark as IGAKU QA as well as all model outputs and exam metadata. We hope that our results and benchmark will spur progress on more diverse applications of LLMs.¹

ChatGPT Outperforms Crowd-Workers for Text-Annotation Tasks^{*}

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Abstract

Many NLP applications require manual data annotations for a variety of tasks, notably to train classifiers or evaluate the performance of unsupervised models. Depending on the size and degree of complexity, the tasks may be conducted by crowd-workers on platforms such as MTurk as well as trained annotators, such as research assistants. Using a sample of 2,382 tweets, we demonstrate that ChatGPT outperforms crowd-workers for several annotation tasks, including relevance, stance, topics, and frames detection. Specifically, the zero-shot accuracy of ChatGPT exceeds that of crowd-workers for four out of five tasks, while ChatGPT's intercoder agreement exceeds that of both crowd-workers and trained annotators for all tasks. Moreover, the per-annotation cost of ChatGPT is less than \$0.003—about twenty

Sparks of Artificial General Intelligence: Early experiments with GPT-4

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Abstract

Artificial intelligence (AI) researchers have been developing and refining large language models (LLMs) that exhibit remarkable capabilities across a variety of domains and tasks, challenging our understanding of learning and cognition. The latest model developed by OpenAI, GPT-4 [Ope23], was trained using an unprecedented scale of compute and data. In this paper, we report on our investigation of an early version of GPT-4, when it was still in active development by OpenAI. We contend that (this early version of) GPT-4 is part of a new cohort of LLMs (along with ChatGPT and Google's PaLM for example) that exhibit more general intelligence than previous AI models. We discuss the rising capabilities and implications of these models. We demonstrate that, beyond its mastery of language, GPT-4 can solve novel and difficult tasks that span mathematics, coding, vision, medicine, law, psychology and more, without needing any special prompting. Moreover, in all of these tasks, GPT-4's performance is strikingly close to human-level performance, and often vastly surpasses prior models such as ChatGPT. Given the breadth and depth of GPT-4's capabilities, we believe that it could reasonably be viewed as an early (yet still incomplete) version of an artificial general intelligence (AGI) system. In our exploration of GPT-4, we put special emphasis on discovering its limitations, and we discuss the challenges ahead for advancing towards deeper and more

