



FIELDING ML SOLUTIONS - 2022

FROM GPT-3 TO MODEL MARKETPLACES

MARKET SIZE AND PLAYERS

- The market for AI services is estimated to exceed 2.8 trillion dollars by 2030.
- Key players operating in the global artificial intelligence market:
 - Amazon Web Services (AWS), Brighterion, Inc., eGain Corporation, Google, Inc., IBM Corporation, Intel Corporation, IntelliResponse Systems Inc., Micron Technology, Microsoft Corporation, MicroStrategy, Inc., Next IT Corporation, Nuance Communications, Nvidia Corporation, Oracle Corporation, QlikTech International AB, Samsung Electronics SAP SE, and Xilinx, Inc.

IT'S A GPT-3 WORLD

- Generative Pre-trained Transformer 3 (GPT-3) is the largest (175 billion trainable parameters), most capable, language model (a statistical tool to predict the next word(s) in a sequence) that leverages deep learning to generate human-like text. But GPT-3 doesn't stop there... it can also generate code, stories, poems, etc. GPT-3 falls into the machine learning category known as natural language processing (NLP).

Where does GPT-3 come from?

OpenAI is an AI research and deployment company.
Whose mission is to ensure that artificial general intelligence benefits all of humanity.

NLP USES

- Text summarizers
- Paraphrasing tools
- Classifiers
- Semantic similarity applications
- Open-ended conversational tools

GPT-3 CORPUS

Data Source	Tokens (Billions)	Description
Web Crawl	410	8 years of lightly filtered web crawling
WebText2	19	text of web pages from all outbound Reddit links from posts with 3+ upvotes
Books1, Books2	12, 55	Internet-based book corpora
Wikipedia	3	English language

WEAKNESS

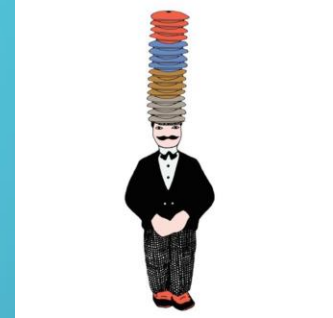
- Verifying the correctness of the information is beyond the scope of the GPT-3 technology.

FINE-TUNING

- Businesses can fine-tune GPT-3 on their own data, creating a custom version tailored to their application. Customizing makes GPT-3 reliable for a wider variety of use cases and makes running the model cheaper and faster.
- It takes less than 100 examples to start seeing the benefits of fine-tuning GPT-3 and performance continues to improve as you add more data

```
openai api fine_tunes.create -t <train_file>
```

MODELS FOR SALE (OR RENT)



- While GPT-3 dominates the NLP space- models for image, audio, or other processing can often be found in AI marketplaces.
- Many marketplaces even offer hosting, which may be the fastest way to create automated decision models that can power new or existing applications, with minimal coding.

AI MARKETPLACES

- AWS Marketplace
 - (<https://aws.amazon.com/marketplace/search>) 1,321 results
 - Example: EagleAi™ TradeWatch Trading Risk module is an ensemble of AI engines that observes trading transactions and learns to identify outliers that matters for Banks and Trading Firms Risk management.
- Modzy
 - Access to 91 certified, pre-trained and retrainable AI models from leading machine learning companies - empowering responsible AI with transparency.
- Modelplace.AI
 - A cloud-based service which offers many types of ML models.
- GenesisAI
 - GenesisAI is gathering numerous expert AI tools and interconnecting them. They envision this AI ecosystem will potentially be able to do pretty much anything.
- SingularityNET
 - SingularityNET aims to be an AI marketplace on top of a blockchain. Their basic idea is to create a blockchain-driven ecosystem where developers can connect and interconnect their different AI solutions.