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Universal College Of Engineering

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THE MISSION

The department is carrying a mission to create and disseminate the knowledge and techniques in the intellectual areas of Engineering and other core areas of Applied Science and Humanities for the betterment of Ecosystem.

To inculcate the importance of Applied Science and develop a natural flair for Engineering and Technology which in turn shall mold students into a competent professional.
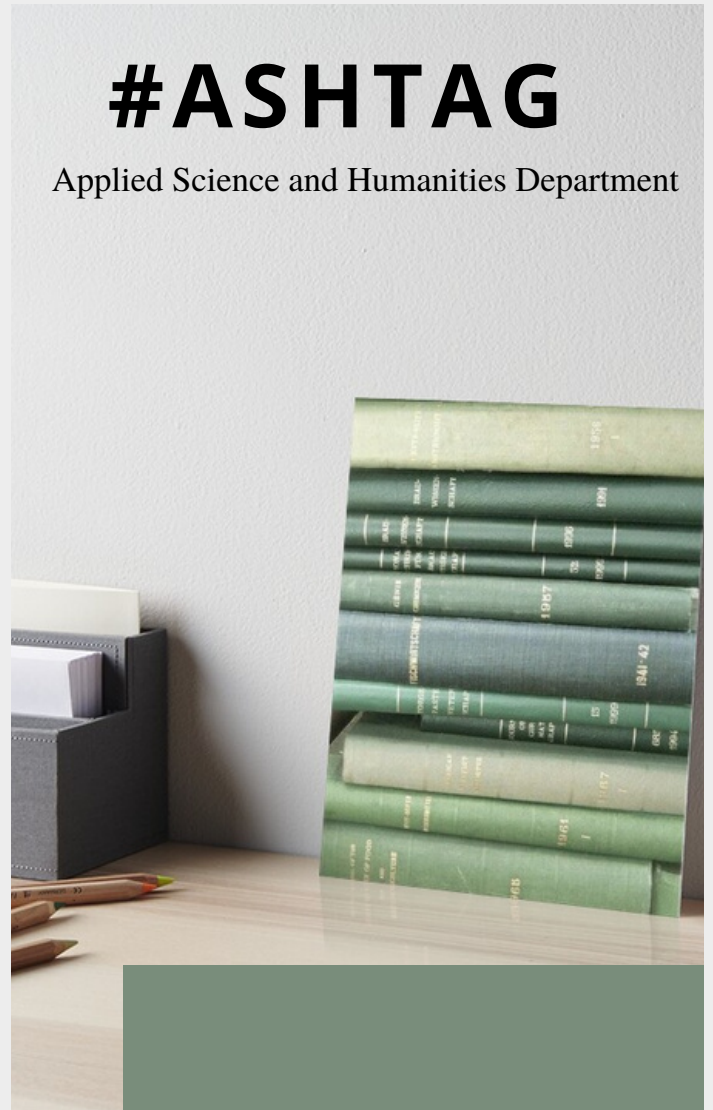
THE VISSION

The Department of Applied Science and Humanities committed to dynamically integrate the components Science, Humanities Engineering to groom students to transform them as globally acknowledged professionals.

To keep pace with fast developing scenario of technology and socio economic environment while planning to develop a world class technical institution.

#ASHTAG

Applied Science and Humanities Department

Keep your eyes on star
but your feet on ground

Google CEO Sundar Pichai introduces Chat-GPT rival Bard; here's what it can do

ChatGPT was introduced in the month of November last year. Since then, OpenAI has revealed the extraordinary capabilities of ChatGPT and its impact on daily lives. Google has been working on AI for the past six years and it has finally revealed Bard.

In a blog post, Google CEO Sundar Pichai explained who is Bard and some of its basic functionality. Bard is an experimental conversational AI service. Powered by the company's Language Model for Dialogue Applications (LaMDA). What separates Bard from ChatGPT is that it will be able to derive information from the web.

Bard's Availability

Google is releasing Bard initially with a lightweight model version of LaMDA, which requires less computing power, making it easier to scale to more users and get more feedback. The company plans to combine external feedback with its internal testing to enhance Bard's responses and to ensure higher 'quality, safety and groundedness in real-world information'.
Trusted testers will be given access to Bard in the coming weeks, before it becomes more widely available to the public.

"Move forward. Good things are up ahead."

COMPLIED BY: *Gati Shinde and Sanket Shirke*

SOURCE: *https://www.businesstoday.in/technology/news/story/google-ceo-sundar-pichai-introduces-chat-gpt-rival-bard-heres-what-it-can-do-369242-2023-02-07*

ChatGPT vs LaMBDA

Although Google has long held this reputation, we don't think ChatGPT poses a significant danger to it. We think this moment will be comparable to the Instagram moment on Meta back in 2012, Snapchat Stories in 2016, and TikTok in 2020, even though the latter still represents a significant technological and experience change for the foreseeable future. Threats have thus far met with a certain degree of success, retaining their lion's share of the global social media market at 67.13% by November 2022. Therefore, assuming that GOOG can also defeat this threat is not excessively ambitious given what Sundar Pichai has accomplished thus far. The business has reportedly started "Operation Code Red" in response to ChatGPT's enormous popularity. By mid-2023, the CEO had ordered a number of departments, including research, trust, and security, to quickly develop and introduce competing AI prototypes and products.

Without a doubt, Google must continue to develop and adapt to fierce competition and changing consumer wants by reengineering its Google search engine with AI technology and maintaining its ad revenue. The corporation may be able to invest more time and resources with 30.26K new hires so far this year. R&D spending has already reached $29.22B over the last nine months, growing by 27.93% YoY.

On the other hand, OpenAI has projected $1 billion in revenue by the fiscal year 2024, however, depending on how the platform obtains and pays for its information, a monetization problem could materialize. The platform's ability to access Twitter's database for AI training already worries Elon Musk. It is unclear how OpenAI will influence ChatGPT's future development away from its original objective of being an open-source and non-profit service, even though the platform may one day be made available to consumers and businesses as a paid membership service. gives.

Combined with the factors discussed above, we can say that Google's LaMDA is giving a neck-to-neck competition to ChatGPT. Time can only say LaMDA or ChatGPT, who will stand the best in the battle.

COMPLIED BY: *Gati Shinde and Sanket Shirke*

SOURCE: *https://www.analyticsinsight.net/chatgpt-vs-lamda-which-ai-driven-language-model-will-win-the-battle/*

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Top 10 Applications for Large Language Models In 2023

A Large language model or LLM is a deep-learning algorithm that has been trained on massive amounts of text data, in this case, tens of millions of publicly accessible Github code repositories. Github's Copilot product is an example of a large language model (LLM) application. Copilot will make suggestions for how to finish a line of code within the coding interface, or even generate multiple lines of code from a plaintext description. Copilot is built with OpenAI's Codex's LLM, which translates natural language into a variety of popular programming languages.

You may have heard of a few other high-profile LLM programs. Google's LaMDA is an expert at generating dialogue. Google's long-term goal with LaMDA is to power a conversational interface that will allow customers to retrieve any type of information (text, images, etc.) from Google's products simply by asking – essentially, a very intelligent chatbot. In this article, we have explained the top 10 applications for large language models in 2023. Read this article to know more about applications for large language models in detail.

1. Tech Risk

GPT-3 demonstrates the viability (and cost) of other copywriting generation startups, but it requires a more competitive market. Furthermore, if you decide to use a large company's API, such as OpenAI, to build your application and there are no alternatives, you are subject to their pricing power and product SLAs. More thoughts on how this dynamic could play out are included at the end of this post.

LLMs have known issues, and research is ongoing to improve their accuracy and explain their ability on a wide range of inputs. GPT-3 and Codex, for example, will occasionally output biased language and insecure or incorrect code, especially when confronted with an adversarial user. They are, however, correct enough of the time that many users find the models useful.

2. Copywriting

The most well-known model is GPT-3, but there are open-source alternatives such as BLOOM (from BigScience) and Eleuthera AI's GPT-J. Copy AI, Copysmith, Contenda, Cohere, and Jasper AI are among the startups developing applications in the space, with products to speed up writing blogs, sales, digital ads, and website copy.

Top 10 Applications for Large Language Models In 2023

3. Shell Command Generation

Warp, a next-generation terminal, employs GPT-3 to convert natural language into executable shell commands, much like "GitHub Copilot, but for the terminal." Even experienced engineers may find shell commands confusing

4. Database Query Optimization

Ottertune detects and resolves database issues such as cache misses and missing indexes, which can lead to unexpected problems. We are not sure if Ottertune uses LLMs for this, but it's something we have discussed with others as a possible LLM use case.

5. Website Generation

Pygma is a tool that converts Figma designs into high-quality code. Salesforce's long-term vision for CodeGen includes allowing users to converse to design and generate a website.

6. General Software Tool Assistant

The vision of Adept AI is to suggest workflow steps for any software, essentially becoming a universal copilot/assistant. There's a great demo showing early results here. Character AI and Inflection AI may also be developing in this space based on their home page descriptions, but little is known about them at the moment.

7. Translation

Meta has researched to translate 204 different languages, which is twice as many as had previously been attempted, at a higher quality than had previously been achieved.

8. Product Insights

Viable, Enterpret, Cohere, and Anecdote organise and summarise user feedback (e.g., support tickets, surveys, and analytics) into actionable insights for future product development.

9. SQL Generation

Cogram converts plain English into database queries, allowing nontechnical users to obtain data and business insights without having to write SQL.

10. Code generation

The most popular model is Codex (which powers Copilot), but there is an open-source alternative in Salesforce's CodeGen. Tabnine, Codiga, and Mutable AI are among the startups developing applications. The majority of the feedback on Copilot was positive, but there were some complaints, such as wanting to self-host or fine-tune their models, customise workflows, and fix some issues Codex has with frontend frameworks and test generation.

COMPLIED BY: *Gati Shinde and Sanket Shirke*

SOURCE: *https://www.analyticsinsight.net/top-10-applications-for-large-language-models-in-2023/*

Top 10 Backend Frameworks Software Developers Should Learn In 2023

1 - CASP.NET Core

ASP.NET Core is a cross-platform and open-source framework for developing .NET applications. This framework is a lightweight implementation of the Microsoft server stack that allows you to build and run applications across multiple platforms and environments. Many programming languages, including C#, F#, Visual Basic, NodeJS, and JavaScript, can be used to create web apps and API servers.

When developing web or mobile applications for Windows users, ASP.NET Core is the best backend language and framework to use.

2 - Ruby on Rails

The Ruby on Rails framework is well-known for its full-stack capabilities as well as its easy to use. The framework's goal is to make building web applications easier than ever before by removing a lot of the guesswork. The framework provides the infrastructure (components), allowing you to concentrate on what is important: your application's code.

Even though it is not a widely used programming language, it is a popular backend framework because it assists developers during the programming process with ease, automated testing, and libraries.

3 - Django

Django is an open-source web framework which is written in python and focuses on building database-driven complex websites. It follows the model–view–controller architectural pattern. If your priority is to have a high-performance website, then Django is the right solution for you.

4 - Laravel

If you've been looking for a PHP backend framework, Laravel is one of the best choices you can make. This open-source is intended for symphony-based web applications. Laravel is the best choice if you want to focus on back-end development.

Laravel may be better suited for beginners, but it is complicated when it comes to managing a simple or small project. It is best suited to experienced developers who want to work on complex projects.

5 - Express.js

It is a backend framework of Node.js which is also known as Express. This framework is used to build web applications and APIs. Express.js is a MEAN stack backend component along with NoSQL databases and Angular JS frontend. Additionally, Express.js is acknowledged as one of the top frameworks for developing several online applications.

Top 10 Backend Frameworks Software Developers Should Learn In 2023

6 - Flask

Flask is a WSGI framework that runs the web servers rather than a user browser. Flask allows several modern applications to create customized projects that run at a smooth pace. It offers assistance for the feature by adding extensions that might make them appear even though they were built directly into the flask.

7 - Spring Boot

The spring-boot framework is an open-source framework that uses JavaScript framework for the backend. The framework offers a customizable and powerful and modular environment which allows you to build complex enterprise-grade applications.

8 - Koa

Koa is an open-source, flexible and minimal backend framework of Node.js (which is considered one of the best frameworks for app development). Koa eliminates callbacks and vastly improves error handling by using async functions. It gives users access to a variety of quick server writing techniques while being free of any fundamental middleware.

9 - Phoenix

Phoenix is an open-source framework and an advanced web application platform written in Erlang and Elixir. It uses the Elixir programming language with a closer syntax to ruby and the Erlang VM for reliable, and fault-tolerant apps. The framework also supports real-time client communication via agnostic channels and WebSocket. It also requests/responds to functionality from the Cowboy server.

10 - CakePHP

The CakePHP makes web development easier by providing a scaffold that can be used as a kickstart for building web applications. You can also use a scaffold as a starting point for building web applications. CakePHP follows MVC architecture and is available under an MIT license.

CakePHP, the most secure backend framework, can provide the standard architecture to build your web application at any level if you have hands-on experience with the PHP backend framework.

Ageratina altissima, also known as white snakeroot, is a poisonous plant native to the prairie of North America that causes tremors in herbivores. Tremetone is one of the major toxic compounds in white snakeroot, which can contaminate the meat, milk, and dairy product of herbivores. If consumed in large enough quantities, it can cause tremetol poisoning in humans. The poisoning is also called Milk Sickness.

In the early 19th century, The Mideast part of the U.S. was flooded with European immigrants who were unaware of white snakeroot.

It killed thousands of people, including Nancy Hanks, the mother of U.S. President Abraham Lincoln.

ICMISM 2022
(16th and 17th December 2022)

INTERNATIONAL CONFERENCE ON MATERIALS INNOVATION AND SUSTAINABLE MANUFACTURING

CERTIFICATE OF APPRECIATION

This is to certify that paper titled An Experimental and Numerical Comparison on Traditional Spring DVA in parallel and Shape Memory Alloy Actuated DVA in Series and Parallel for Fixed Beam Vibration Control co-authored by Shivam Shukla is selected as **best paper** at the International Conference on Materials Innovation and Sustainable Manufacturing (ICMISM-2022) during 16th & 17th December 2022, organized by the Department of Mechanical Engineering, Vishnu Institute of Technology-Bhimavaram, Andhra Pradesh, India.

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