

Applications Across Various Industries

Instructor

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Outline

- Popular Applications of Generative AI Apps
 - Tech Support
 - Content Creation
 - Data Analytics
 - Code Assistant
 - Video Learning Assistant
 - QA Chatbot
- Summary

Tech Support



Tech Support Advisor

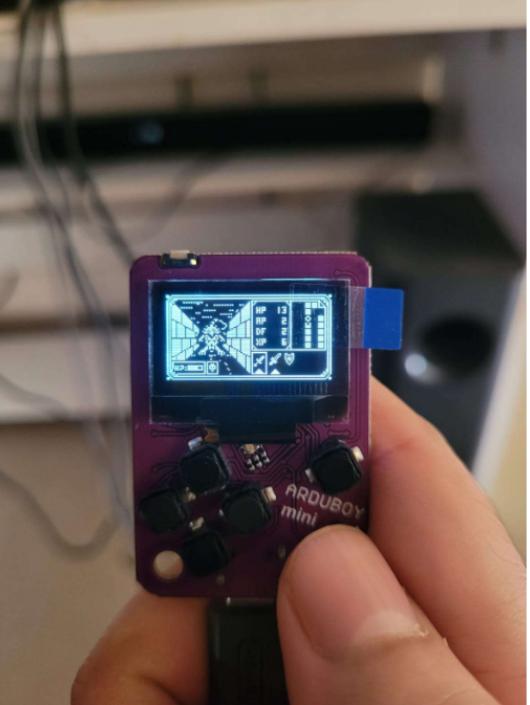
By ChatGPT 

From setting up a printer to troubleshooting a device, I'm here to help you step-by-step.

Try it out: <https://chat.openai.com/g/g-WKlaLGGem-tech-support-advisor>

Tech Support

You



How do I setup and start using my new Arduboy Mini for gaming

Tech Support Advisor

The Arduboy Mini in your picture looks like a neat little device for gaming on the go! Setting it up and starting to use it for gaming typically involves a few simple steps:

1. **Charging the Device:** Make sure your Arduboy Mini is fully charged before using it. You should have received a USB cable that can be used to charge it.
2. **Powering On:** There should be a power switch or button to turn the device on. Once it's on, you may see a welcome screen or menu.
3. **Navigating Menus:** Use the buttons on the device to navigate through the menu. The Arduboy Mini has a simplified interface, so there should be minimal options like 'Play Game', 'Settings', etc.
4. **Selecting a Game:** If the device comes preloaded with games, you can select a game to play using the directional buttons and confirm your selection with the 'A' or 'B' button.
5. **Game Controls:** Once in a game, the controls are usually straightforward: the directional buttons move your character or navigate menus within the game, and the 'A' and 'B' buttons perform actions like jumping, shooting, or selecting options.
6. **Adjusting Settings:** If you need to adjust any settings like sound or brightness, you can usually do this from the main menu.
7. **Downloading New Games:** If you want to add new games, the process typically involves connecting the Arduboy Mini to a computer with the USB cable, then using a specific program or website to download games onto the device. The Arduboy community has a repository of games that you can explore.
8. **Community and Support:** For detailed instructions, additional help, or to find new games, you can visit the Arduboy community forums where developers and enthusiasts share their games, tips, and support.

Remember that each version of hardware might have some unique steps, so it's also a good idea to check any documentation that came with your Arduboy Mini or look for specific guides online by the Arduboy community. If you have any specific questions or run into any issues, feel free to ask!

Tech Support



You

I can't seem to find the power button



Tech Support Advisor

On the Arduboy Mini, the power switch may not be as obvious as on other devices. Look closely at the edges of the device for a small sliding switch. This switch might be located on the top or side of the device. It can be quite small and sometimes blends in with the device's casing, so it might not stand out immediately. Slide this switch into the position opposite to the one it's currently in, and that should power on the device.

If you're still having trouble, I'd be happy to look at a photo of the edge of your device to help you locate it!

Content Creation - Presentations



Presentation GPT by SlideSpeak

By SlideSpeak 

Create PowerPoint PPTX presentations with ChatGPT. Use prompts to directly create PowerPoint files. Supports any topic. Download as PPTX or PDF. Presentation GPT is the best GPT to create PowerPoint presentations.

Try it out: <https://chat.openai.com/g/g-4fGuYnJC6-presentation-gpt-by-slidespeak>

Content Creation - Presentations

 **You**
Create a presentation on a brief about Generative AI, history, impact, current technology and large language models, use visuals, charts etc as needed

 **Presentation GPT by SlideSpeak**
 Talked to api2.slidespeak.co
Your presentation on Generative AI, covering its history, impact, current technology, and large language models, is ready. This presentation includes visuals and charts to enhance understanding and engagement.

You can download the presentation [here](#).



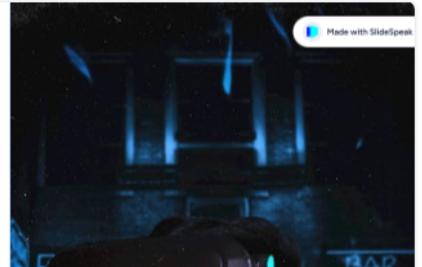
The Future of Generative AI

Continued Advancements

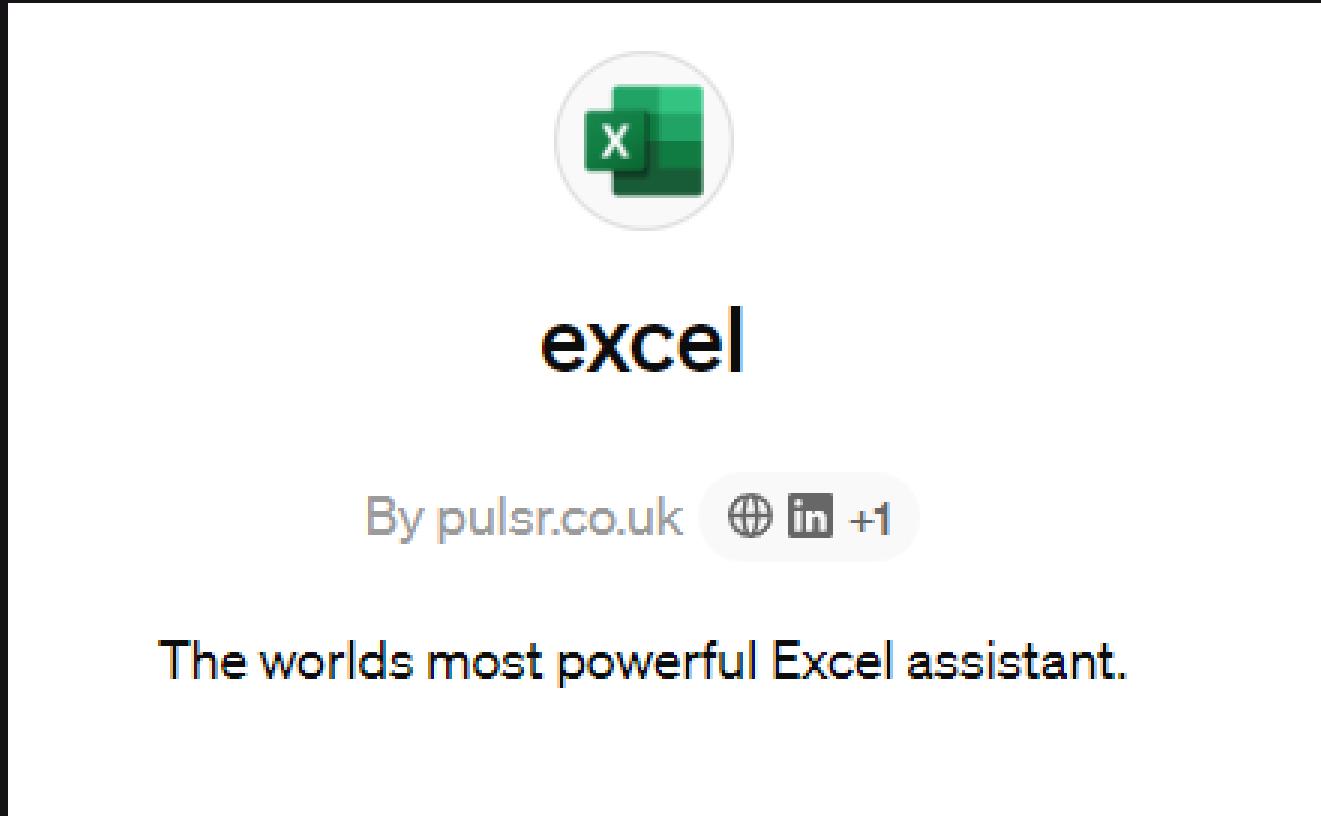
- Ongoing research and development promise even more powerful and efficient Generative AI technologies.

Potential Challenges

- Addressing ethical concerns and ensuring responsible use will be crucial as these technologies become more integrated into society.



Data Analytics - No Code Approach



Try it out: <https://chat.openai.com/g/g-8m2CPAfeF-excel>

Data Analytics - No Code Approach

You

train.csv
Spreadsheet

I have this data on customer churn, help me make two eye catching useful visuals which can convince business stakeholders to let us do a detailed data analysis project on this

excel

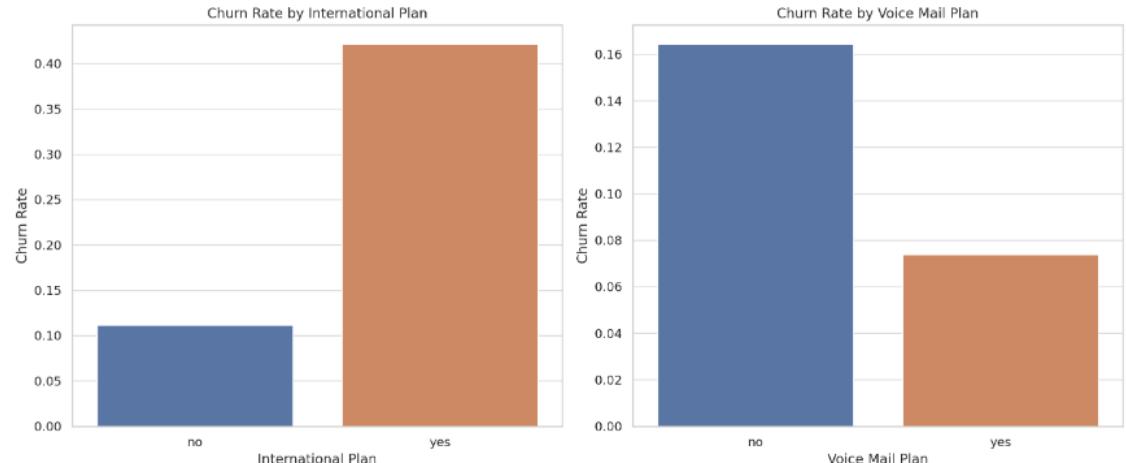
Fantastic! Let's dive into your customer churn data to create two compelling visuals that will help convince your business stakeholders of the value of a detailed data analysis project. I'll start by examining the data you've provided to understand its structure and content. This will help us decide on the most effective types of visuals to create. Please give me a moment to review your file.

Your data contains various features related to customer accounts and usage, including state, account length, international plan, voice mail plan, various call metrics (e.g., total day minutes, total day calls, total day charge, etc.), and the churn status.

To make two eye-catching and useful visuals for convincing stakeholders, we can consider:

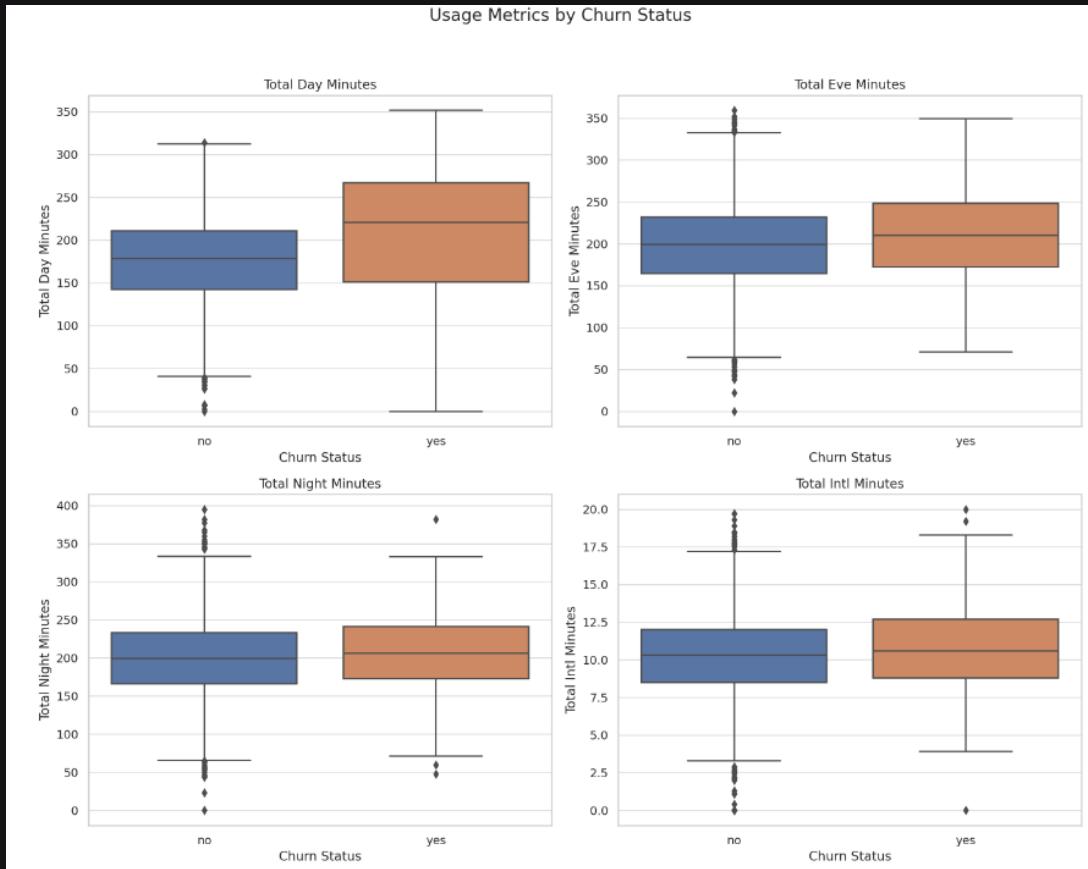
1. **Churn Rate by Feature:** A visual highlighting the churn rate across different categorical features like international plan status or voice mail plan status. This can help in identifying patterns or trends related to customer churn.
2. **Usage Metrics and Churn:** A visual exploring the relationship between usage metrics (like total day minutes, evening minutes, night minutes, international minutes) and churn. This can help in understanding if there's a correlation between usage behavior and the likelihood of churn.

Please allow me a moment to prepare these visuals. [x]



The first visual showcases the **Churn Rate by International Plan Status and Voice Mail Plan Status**. As observed, customers with an international plan appear to have a higher churn rate compared to those without. Similarly, the churn rate among customers without a voice mail plan is higher than among those with a plan. These insights suggest that the presence of an international plan and the lack of a voice mail plan may be indicators of higher churn risk, potentially pinpointing areas for deeper analysis.

Data Analytics - No Code Approach

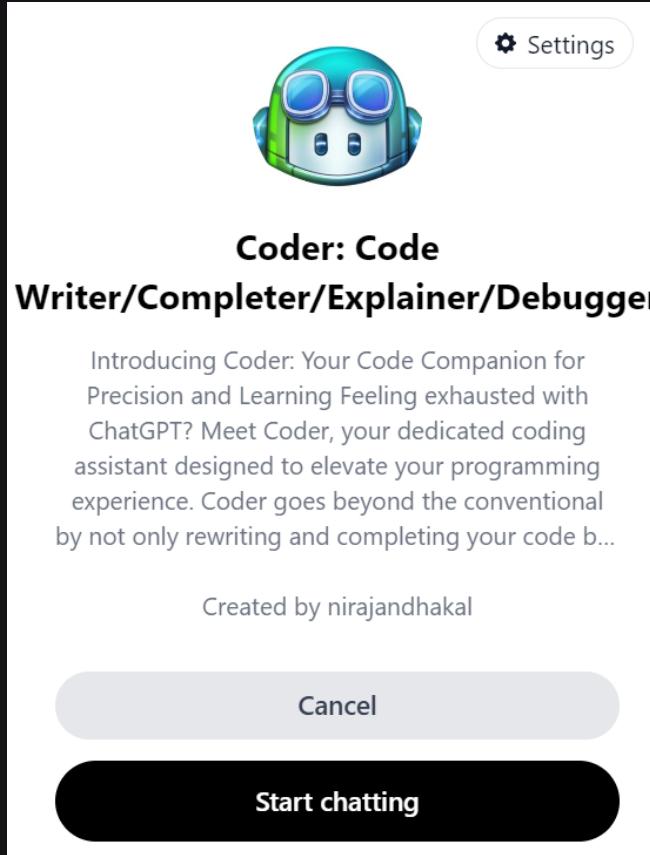


The second set of visuals illustrates the **Usage Metrics (Day, Eve, Night, and Intl Minutes)** by **Churn Status**, comparing the distributions of these metrics between churned and retained customers. These box plots reveal interesting patterns:

- **Total Day Minutes:** Churned customers tend to have higher day minute usage compared to those who remain with the service.
- **Total Eve Minutes:** Similar to day minutes, churned customers show slightly higher usage in the evening.
- **Total Night Minutes:** There's less distinction in night minute usage between churned and retained customers, indicating this may not be as strong a predictor of churn.
- **Total Intl Minutes:** International minutes usage appears slightly higher for churned customers, suggesting that dissatisfaction with international services could be a factor in the decision to leave.

These visuals collectively highlight potential areas of concern that could be driving customer churn, such as high day and international call charges or dissatisfaction with services, making a compelling case for a detailed data analysis project. By diving deeper into these areas, you could uncover actionable insights to reduce churn and improve customer satisfaction.

Code Assistant



Try it out: <https://hf.co/chat/assistant/65be6486e50f1b4ae987a7b1>

Code Assistant

Show me how to build a ML pipeline using scikit learn to solve a classification problem

Sure, I'd be happy to help you build a machine learning pipeline using scikit-learn to solve a classification problem! Here's a step-by-step guide:

First, let's start by importing the necessary packages:

```
import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.pipeline import Pipeline
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, confusion_matrix, classification_report
```

Next, let's assume you already have a dataset loaded into a Pandas DataFrame called `df`. Let's further assume that you have features stored in a variable named `x`, targets stored in a variable named `y`, and that you've split the dataset into training and testing sets:

```
# Load your dataset into a Pandas DataFrame
df = ...

# Separate features and targets
X = df.drop('target', axis=1) # replace 'target' with the name of your actual target column
y = df['target']

# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
```

Now, let's create a machine learning pipeline which consists of several steps, including feature scaling and logistic regression classifier:

```
# Create a machine learning pipeline
pipeline = Pipeline([
    ('scaler', StandardScaler()),
    ('classifier', LogisticRegression())
])

# Fit the model on the training set
pipeline.fit(X_train, y_train)

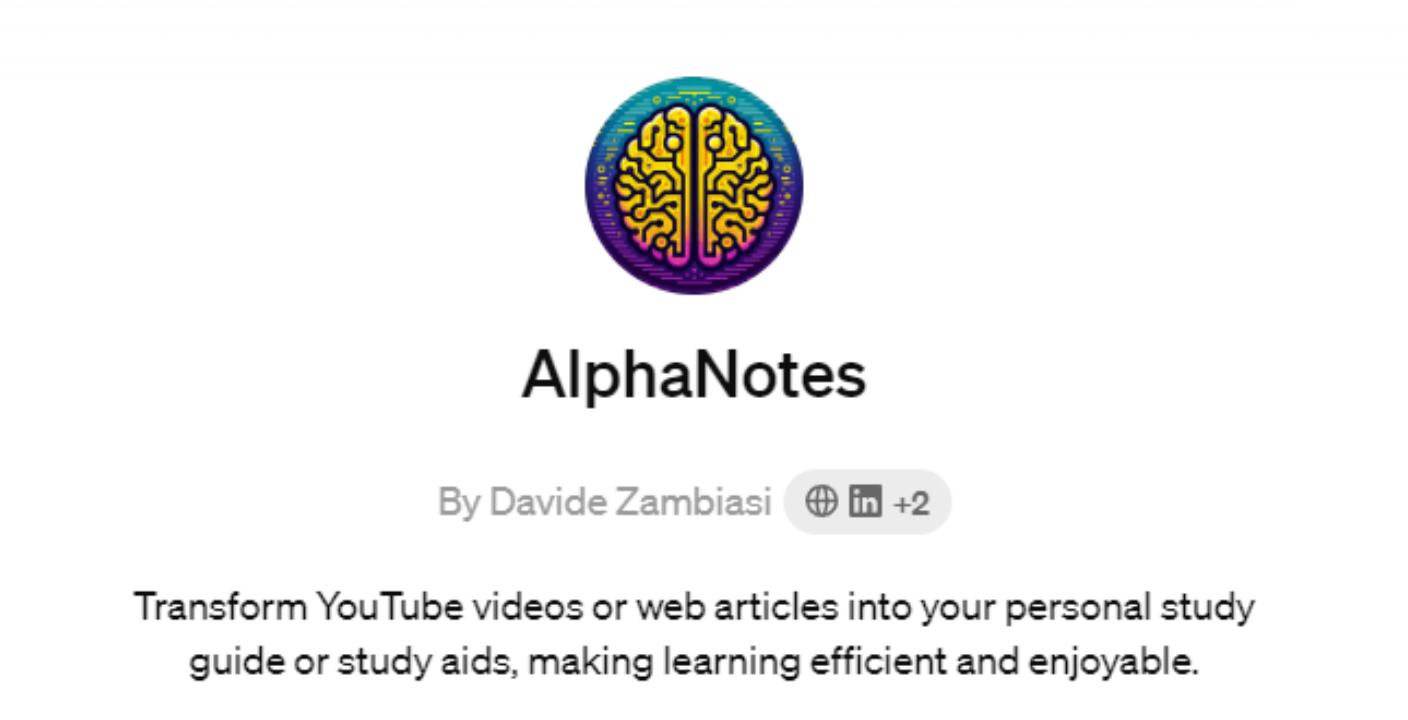
# Predict labels on the testing set
predictions = pipeline.predict(X_test)

# Evaluate the model
print("Accuracy:", accuracy_score(y_test, predictions))
print("\nConfusion Matrix:\n", confusion_matrix(y_test, predictions))
print("\nClassification Report:\n", classification_report(y_test, predictions))
```

Here's what happens in each part of the code above:

- Import required packages - We load essential libraries, mainly NumPy, Pandas, Scikit-learn's preprocessing, modeling, and metrics modules.
- Prepare data - We separate our data into features and targets, assuming the target column is labeled 'target'. Then, we split the dataset into two subsets, one for training and another for testing.
- Define the pipeline - We define a machine learning pipeline consisting of two stages: feature scaling and logistic regression. Feature scaling will normalize the input data before feeding it to the classifier. By default, StandardScaler scales all features so that they have zero mean and unit variance.
- Train the model - After defining the pipeline, fit it onto the training set to teach the model patterns within the data.
- Make predictions - Use the trained model to predict the classes of instances in the testing set.
- Assess the model - Finally, evaluate the quality of the model by computing accuracy scores, creating a confusion matrix, and printing out a classification report containing precision, recall, f1-score, and support per label.

Video Learning Assistant



The image shows a screenshot of a video player interface. At the top, there's a large, colorful brain icon. Below it, the word "AlphaNotes" is displayed in a bold, sans-serif font. Underneath the title, the text "By Davide Zambiasi" is followed by a small circular icon containing a globe and a LinkedIn icon, with a "+2" next to it. A descriptive text below reads: "Transform YouTube videos or web articles into your personal study guide or study aids, making learning efficient and enjoyable." The entire interface is set against a white background.

Try it out: <https://chat.openai.com/g/g-ZdfrSRAyo-alphanotes>

Video Learning Assistant

You
Help me learn about Open AI Sora by telling me the essentials from this video:
https://www.youtube.com/watch?v=olzET9pGvuE&ab_channel=AnalyticsVidhya

AlphaNotes
Talked to ainotes.alphanotes.one

OpenAI Sora Text to Video: Everything You Need to Know (2024)



Introduction
This video serves as a comprehensive guide to the OpenAI Sora model, which marks a significant advancement in AI-based video creation. By integrating deep language understanding with visual context, Sora excels in generating videos that accurately interpret prompts, bringing characters to life with detailed emotions and personalities.

Main Points/Arguments

- **Evolution of AI Video Creation:** Sora distinguishes itself by its ability to combine NLP and computer vision, standing on the research of the last decade.
- **Transformers Architecture (2017):** Introduced the ability to capture long-term dependencies and complex relationships within sequences, enhancing parallel processing and training efficiency.
- **Vision Transformers:** Extended Transformer principles to image recognition, treating image patches as tokens to analyze relationships, thus understanding the static aspect of visuals.
- **Video Vision Transformers:** Adapted to video by incorporating spatial-temporal patches, capturing both static and dynamic information, crucial for understanding video content.
- **Mask Auto Encoders (MAEs):** Introduced efficient training by predicting hidden parts of an image, helping models learn key visual features and improve video generation.
- **Native Resolution Visual Transformer:** Offers the flexibility to process videos and images of any size directly, enabling Sora to handle diverse creative projects.
- **Diffusion Models:** Fundamental to Sora, these models start with noise and add details gradually, learning from vast unlabelled data to generate high-quality videos.
- **Latent Diffusion Models:** Enhance computation efficiency by working in a lower-dimensional space, crucial for high-resolution video generation.
- **Diffusion Transformer:** Replaces the UNet structure with a Transformer, improving handling of image patches and video quality, showcasing the scalability and performance improvement with complexity.

Conclusion

OpenAI Sora represents a breakthrough in AI-based video creation, capable of generating videos of various durations, resolutions, and maintaining 3D consistency. This technology amalgamates the advancements in NLP, computer vision, and diffusion models, setting a new benchmark for text-to-video generation.

Chat with your Data - QA Chatbot



Chat PDF

By aidocmaker.com 

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Try it out: <https://chat.openai.com/g/g-oMM2c1bD3-chat-pdf>

Chat with your Data - QA Chatbot

You
 GENAI ROADMAP (3).pdf
PDF

Explain the contents of this PDF in brief

Chat PDF
The PDF outlines the GenAI Pinnacle Program, a roadmap designed to revolutionize AI learning and development. It covers topics from an introduction to AI, applied machine learning, deep learning, NLP (Natural Language Processing), building applications using Large Language Models (LLMs), fine-tuning and training LLMs, to mastering Stable Diffusion techniques. Additionally, it includes best practices such as setting weekly learning hours, completing regular assignments, and methods for seeking help through forums, email, and mentorship sessions for both US/Canada and non-US/Canada participants.

You
Suggest a roadmap for an expert in AI from the given document to learn Generative AI

Chat PDF
For an expert in AI looking to learn Generative AI from the document, the roadmap suggests focusing on deep learning fundamentals, mastering NLP techniques, and understanding the intricacies of working with Large Language Models (LLMs). This includes exploring generative models, fine-tuning strategies, and experimenting with Stable Diffusion methods. Emphasis is placed on practical application, including project-based learning and leveraging resources such as mentorship and community forums for advanced discussions and troubleshooting.

Summary

- Generative AI Apps are utilized in various industries:
 - Media, Entertainment, Healthcare, BFSI, and more.
- Popular use cases:
 - QA Chatbots, Search, Summarization, Content Creation, Tech Support, Code and Learning Assistants

"We'll be creating end-to-end Generative AI Apps like these use cases"

Thank You
