



# **ARTIFICIAL INTELLIGENCE (AI): ChatGPT and DALL-E**

## **Making Life Simpler or The End of Humanity**

**OLLI CLECAT – TOM LA CASA**  
**13 February 2023**

“The term ‘artificial intelligence’ means a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments.”

**NATIONAL ARTIFICIAL INTELLIGENCE ACT OF 2020**

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# ChatGPT



## ChatGPT: Optimizing Language Models for Dialogue

## DALL·E\*: Creating Images from Text



\*The software's name is a blend (portmanteau) of the names of animated robot Pixar character WALL-E and the Spanish surrealist artist Salvador Dali

# OpenAI - Developer

- OpenAI is an AI research and deployment company (founded by Elon Musk and Sam Altman)
- OpenAI's stated mission is to ensure that artificial general intelligence benefits all of humanity
- Artificial general intelligence (AGI)—highly autonomous systems that outperform humans at most economically valuable work



# Generative AI – Latest Trending Topic

- Generative AI is the practice of using machine learning algorithms to produce (generate) content in the form of text , images, music, video, etc.
- Generative AI is not a new concept, the machine-learning behind it has evolved over the past decade
- ChatGPT (Generative Pretrained Transformer) is a type of large language model trained on vast amounts of text data from the internet that uses deep learning to 'generate' human-like text (or images) based on received inputs
- However, this human-like text may not always produce output that is consistent with human expectations or desirable values
- 'Pretrained' because the model is trained on a large collection of text data before being fine-tuned for specific tasks
- The model uses a neural network architecture (used for solving AI problems) that allows it to 'transform' the input text and generate output text and/or images

# ChatGPT the revolutionary AI

## ChatGPT Sprints to One Million Users

Time it took for selected online services to reach one million users



\* one million backers \*\* one million nights booked \*\*\* one million downloads

Source: Company announcements via Business Insider/LinkedIn



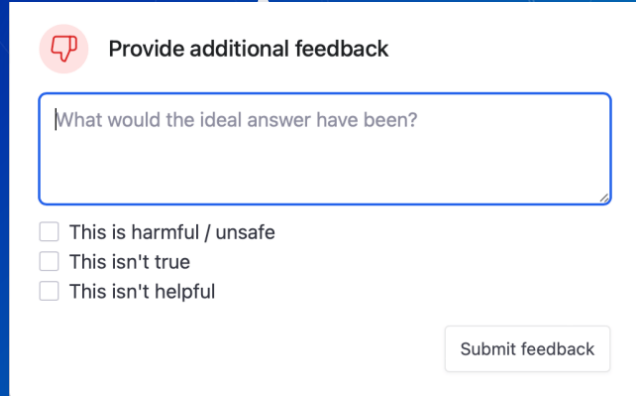


# CHATGPT – What is it?

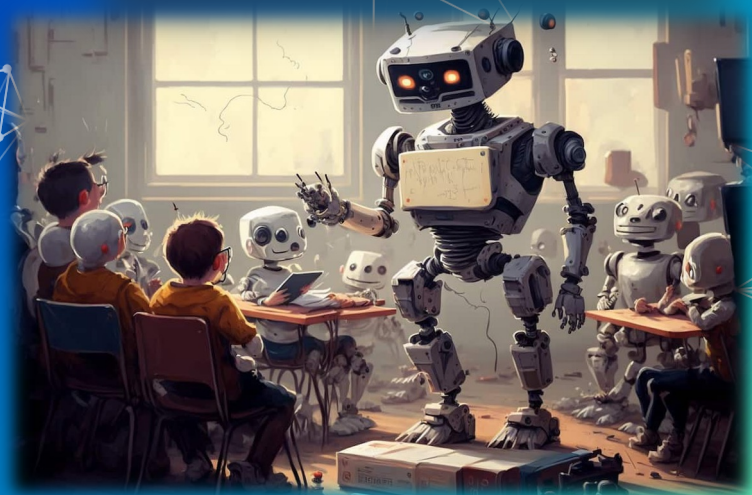
- ChatGPT is a type of large language model launched in November 2022 that uses deep learning
- A key feature is ChatGPT's ability to generate human-like text responses to prompts (your inquiry)
- ChatGPT is not connected to the internet...cannot fetch new information
  - It can occasionally produce plausible-sounding but incorrect or nonsensical answers
  - It has limited knowledge of the world and events after 2021
  - It may occasionally produce harmful instructions or biased content
- ChatGPT was (is) trained on internet data and is bound to represent the same bias and inaccuracy that the internet is filled with...**USE YOUR OWN JUDGMENT**

# CHATGPT – What is it?

- ChatGPT is sensitive to tweaks to the input phrasing or attempting the same prompt multiple times (a slight inquiry rephrase can yield a different response)
- ChatGPT creators use human feedback in the form of our conversations to improve the “learning” capability of ChatGPT (if you find an answer is unrelated, you provide feedback by using the "Thumbs Down" button)
- ChatGPT was trained on a diverse set of texts, so it can understand and generate text in a variety of languages (at least 95)...it is primarily designed to understand and generate text in English
- ChatGPT frequently uses US genres and templates to answer questions...but this won't last as people around the world are using ChatGPT, and training it to align more with other cultural values



A screenshot of the ChatGPT feedback interface. At the top, there is a red speech bubble icon with a white thumbs-down symbol, followed by the text "Provide additional feedback". Below this is a large, empty text input box with a blue border and a small blue checkmark icon in the bottom right corner. Underneath the input box are three checkboxes with corresponding text: " This is harmful / unsafe", " This isn't true", and " This isn't helpful". In the bottom right corner of the feedback panel, there is a white button with the text "Submit feedback".





# ChatGPT – Getting Started

- The basic version is currently free for use...as of 1 February a new subscription plan (available only in USA), ChatGPT Plus, is being offered for \$20/month
- OpenAI does require an account before you can use ChatGPT (as well as DALL-E), so you will have to register
  - You have the option of choosing an easy login with a Google or Microsoft account
  - You must enter a mobile number; you receive a text with a code
  - You will then receive a text with a confirmation number, which you enter on the registration page to complete the setup
- Many people attempting to use ChatGPT recently have been getting an “at capacity” notice when trying to access the site...be patient as there are currently over 100 million subscribers (Hint: go with ChatGPT Plus)

# How To Use ChatGPT

- ChatGPT is available via a webpage (<https://openai.com/blog/chatgpt/>), so no downloading is needed
- OpenAI has yet to release an official app, even though app stores are full of fake versions
- The ChatGPT webpage is simple and includes an area for the results to populate and a text box at the bottom of the page for users to type inquiries
- You simply type your inquiry, select the "enter arrow", and watch as the response scrolls across your screen

The screenshot displays the ChatGPT web interface with two example interactions. The first interaction shows a user asking "What is there to do in Vancouver canada" and receiving a list of 10 activities. The second interaction shows a user asking "Tell me more about stanley park" and receiving a detailed paragraph about the park. The interface includes a text input field at the bottom, a "Regenerate response" button, and an "ENTER" button with an arrow icon.

**T** What is there to do in Vancouver canada  
**Your inquiry displayed here**

**G** Vancouver, Canada offers a wide range of activities to do, including: 👍 🗨

1. Visit Stanley Park and walk the seawall
2. Explore the Granville Island Public Market
3. Take a trip up to Grouse Mountain
4. Visit the Capilano Suspension Bridge
5. Enjoy the beaches and parks, such as English Bay and Kitsilano Beach
6. Check out the art scene at the Vancouver Art Gallery
7. Visit the Museum of Anthropology at UBC
8. Shop on Robson Street or visit the trendy neighborhoods of Gastown and Yaletown
9. Take a day trip to Whistler for skiing or hiking
10. Enjoy the city's diverse cuisine and craft beer scene.

**T** Tell me more about stanley park  
**Your inquiry displayed here**

**G** Stanley Park is a 405-hectare (1,001-acre) public park located in the heart of Vancouver, Canada. It is one of the city's most popular tourist destinations and is considered one of the best urban parks in the world. 👍 🗨

The park offers a wide range of activities, including walking and biking trails, beaches, playgrounds, sports facilities, and cultural landmarks. One of the most popular attractions is the seawall, a scenic 9-kilometer (5.5-mile) path that wraps around the park's perimeter and offers stunning views of the city, the harbor, and the North Shore Mountains.

Other notable features of the park include the Totem Poles, a collection of 9 totem poles that were carved by Indigenous artists and erected in the park in the 1920s, and the Vancouver Aquarium, a public aquarium that is home to over 50,000 animals.

There are also several gardens in the park, including the Stanley Park 👍 🗨

**ENTER**

**You type your inquiry here**



# Let's See ChatGPT in Action

## ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms" →	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?" →	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?" →	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

REMEMBER

You type your inquiry here

GENERATE

+ New chat

Opinion on Humans

Who are you

Previous Conversations

Delete Previous Conversations

Clear conversations

Upgrade plan

Light mode

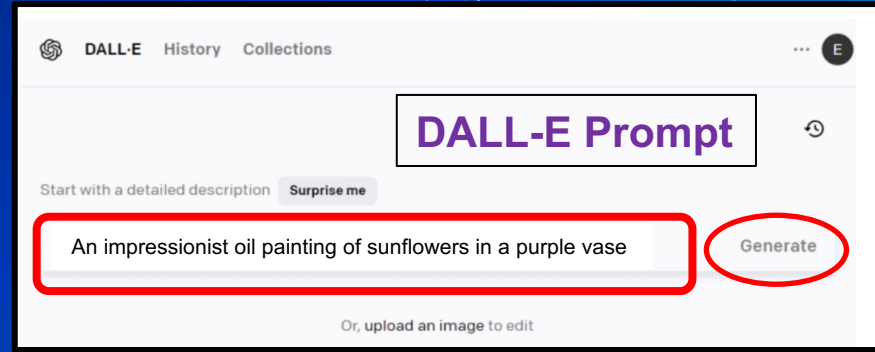
OpenAI Discord

Updates & FAQ

Log out

# DALL-E – What is it?

- Creates photos, illustrations, paintings, or 3D art from text captions (**the prompt**) for a wide range of concepts expressible in natural language
- You provide DALL-E with a text description, and it generates an image that fits the description
- Recently released, DALL-E has been integrated into a new Microsoft software product...Microsoft Designer (Microsoft announced a \$10 billion investment)





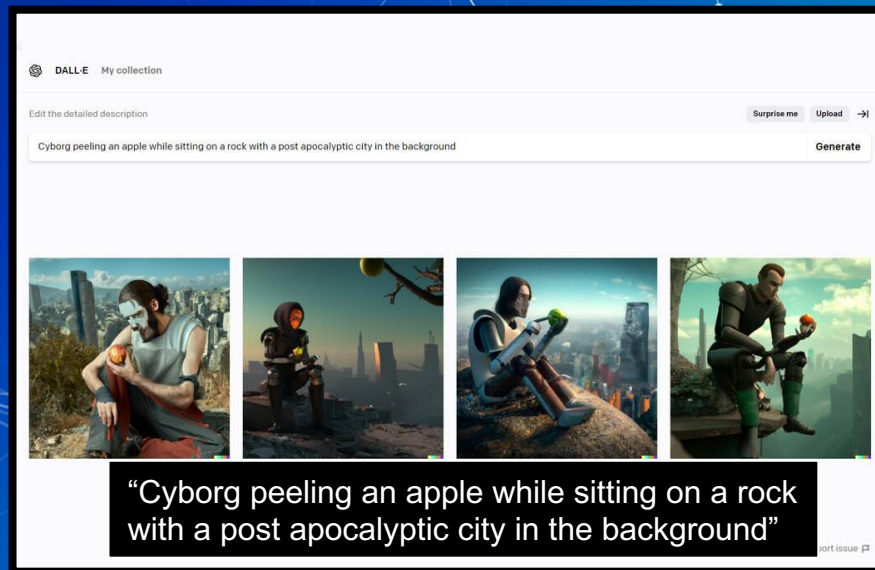
# DALL-E – Getting Started



- The first thing to do is create an account at [labs.openai.com](https://labs.openai.com)
  - Use a Google or Microsoft account or,
  - Create a login with an email address and a strong password
- DALL-E is not entirely free; service runs on "credits"
  - You get 50 free credits at signup, and then 15 credits free per month (actually 30 days from when you signup) after that
  - Credits don't roll over
  - Paid credits do roll over month to month, for up to 12 months; get 115 credits for \$15

# DALL-E – Use of Credits

- One credit lets you do one AI art generation (you get four new images per typical generation)
- A credit is also used for creating a variation of already-generated art
- But the prompt is the thing; turns out a lot better if you perfect the prompt, which is limited to 400 characters
  - The prompt has both content (what you want to see) and modifiers (how it should look)
  - Not feeling very creative; there is the [Dall-E 2 Prompt Book](#)



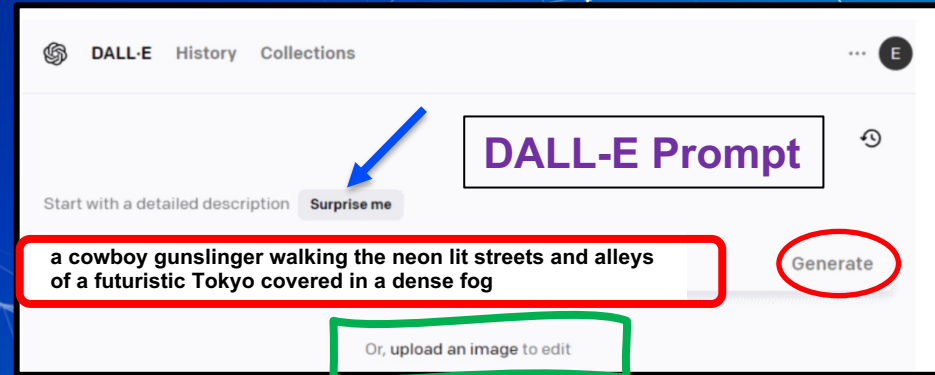


Pebble Beach Golf Course 14<sup>th</sup> Hole at Sunset – Tom La Casa



# DALL-E – The Prompt

- Once signed up, you'll be greeted with a prompt
  - You enter a description of the image you desire
  - If you click the "Surprise me" button, you'll see other random prompts dropped into the text box
  - Nothing counts against your credits until you click "Generate"
  - DALL-E places a watermark on each generated image...can be removed
  - You can also upload an image of your own and use DALL-E to edit it, to add new AI-generated content, or to make completely new variations of the original



Want to Remove  
the DALL-E  
Watermark

# OLLI Watercolor would be impressed



Watercolor painting of people walking at night in the rain on a street in New Orleans – Tom La Casa

# Let's See DALL-E in Action



API RESEARCH BLOG ABOUT

LOG IN SIGN UP

# DALL·E 2


DALL·E 2 is a new AI system that can create realistic images and art from a description in natural language.

- SIGN UP
- 📷 FOLLOW ON INSTAGRAM
- 📄 VIEW API DOCS
- 📄 VIEW RESEARCH
- ↓ EXPLORE





# 'Ethics in AI'



*"Can smart machines outthink us, or are certain elements of human judgment indispensable in deciding some of the most important things in life?"*

# Generative AI: What are the Ethical Concerns

■ Manipulate public opinion



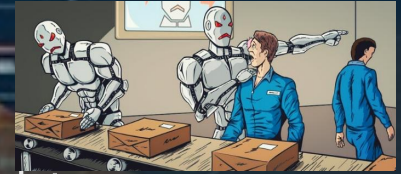
■ Copyright protection (intellectual rights)



■ Cybercriminals new tool



■ Will AI take everyone's job



■ Inaccurate information \*



■ Social biases (e.g., sexist, gender, racist)



\*OpenAI warns of this on its web site

# Generative AI: What are the Ethical Concerns

Education (student privacy, design, implementation\*, access to technology)



Privacy (facial recognition, data accuracy, data protection, data control)





# Generative AI: How Concerned Should We Be



“The idea that an autonomous thing could generate results is obviously useful for war”

“I’m more worried about an accidental misuse case. I think it’s impossible to overstate the importance of AI safety and alignment”

Sam Altman, CEO OpenAI

“The country that advances the fastest in AI capabilities is going to define the law of the land”

“Such tools can be misused, or it can be used by bad actors. It’s important for companies like ours to bring this into the public consciousness in a way that’s controlled and responsible”

Mira Murati, CTO OpenAI

# Quick Review



- A large language model that uses AI to hold conversational text interactions with users
- ChatGPT is currently free; you need to register an account with an email
- ChatGPT can give inaccurate and incorrect information, so be sure to double check its responses



- An AI art platform, DALL-E, creates images from text descriptions
- DALL-E is currently free to use; you're allotted 50 free credits when you establish an account
- When ready to create your art, type a descriptive phrase into the prompt



# Generative AI is suddenly everywhere

- OpenAI has launched a tool that attempts to distinguish between human-written and AI-generated text to combat cheating and plagiarism...isn't particularly accurate
- ChatGPT has accomplished several impressive feats, including passing the US Medical Licensing Exam, a Wharton MBA exam, and 4 law school courses
- Real estate agents across the country are turning to generative AI to help write up listing descriptions and content scripts...for social media videos and listing descriptions
- Generative AI is envisioned as helping workers across many industries – from tech to media – to boost productivity
- The financial world is all ablaze over anything with “AI” in its mission statement...investors BEWARE



# Latest Updates...Let the Games Begin

- "It's a new day for search," says Microsoft CEO Satya Nadella
  - Microsoft announced its long-rumored integration of OpenAI's latest GPT model into Bing...limited, need to get on a waitlist\*\*
  - The company is also launching a new version of its Edge browser, with new AI features built into the sidebar
- The bigger picture is the **multi-billion-dollar sector that is internet search**
- Google (Alphabet) released its own regenerative AI competitor "Bard" to a set of trusted users ahead of a public debut in the coming weeks
  - Bard will serve as an "experimental conversational AI service," per Google CEO Sundar Pichai
  - Bard recently delivered inaccurate information to a question on the James Webb telescope...GOOGL stock declined severely and continues to slide

\*\* <https://www.bing.com/new?toWww=1&redig=8AAD544DC96A482B933E65ED84A96108>

# ChatGPT Learn More - References

## ■ OpenAI

➤ <https://openai.com/about/>

## ■ Chatgpt Pro

➤ <https://chatgpt.pro/>

## ■ ChatGPT Tutorial - A Crash Course on ChatGPT for Beginners

➤ <https://youtu.be/JTxsNm9ldYU>

## ■ Digital Trends – How to Use ChatGPT

➤ <https://www.digitaltrends.com/computing/how-to-use-openai-chatgpt-text-generation-chatbot/>

## ■ Generative AI

➤ <https://www.weforum.org/agenda/2023/01/davos23-generative-ai-a-game-changer-industries-and-society-code-developers/>

## ■ Big Tech was moving cautiously on AI, then came ChatGPT

➤ <https://www.yahoo.com/news/big-tech-moving-cautiously-ai-212112653.html>

# DALL-E Learn More - References

- OpenAI DALL-E
  - <https://openai.com/blog/dall-e/>
- How to Use DALL-E
  - <https://www.pcmag.com/how-to/how-to-use-dall-e-ai-art-generator>
- The DALL-E Prompt Book
  - <https://dallery.gallery/the-dalle-2-prompt-book/>
- How to Use DALL-E to Generate Images
  - <https://www.youtube.com/watch?v=bEq7NfNH58Q>
- Top 7 Tips to Create Stunning Images with DALL-E
  - <https://www.guidingtech.com/best-dall-e-2-tips-and-tricks/>
- How to Save DALL-E Images w/o the Watermark
  - <https://www.guidingtech.com/how-to-save-dall-e-2-images-without-watermark/>
- Venture Beat
  - <https://venturebeat.com/ai/dall-e-2-the-future-of-ai-research-and-openais-business-model/>



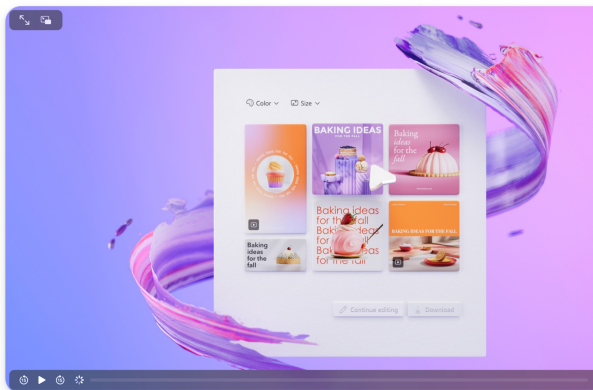
# Additional Artistic Sites

Stunning designs in a flash  
with Microsoft Designer

Add your email

Join the waitlist

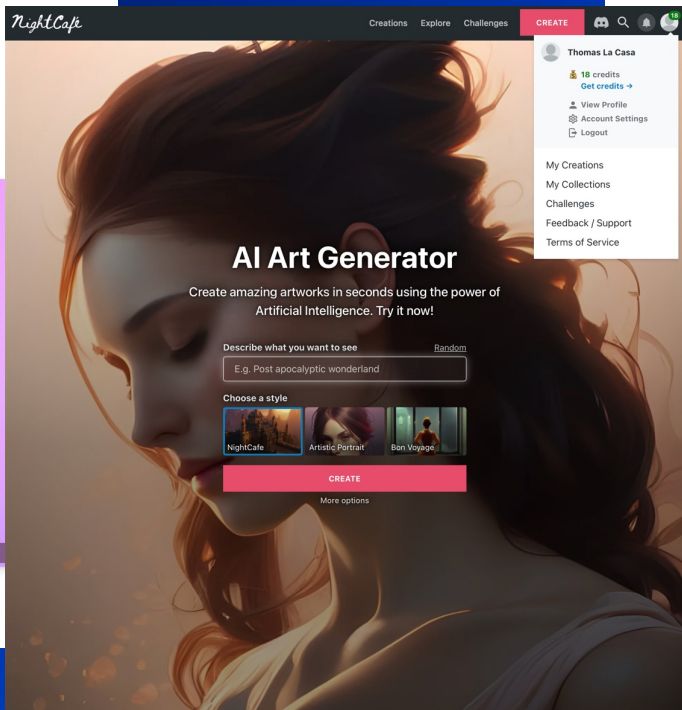
We'll email you instructions for how to log in once we've given you access to Microsoft Designer.



It's never been easier to approach a blank canvas

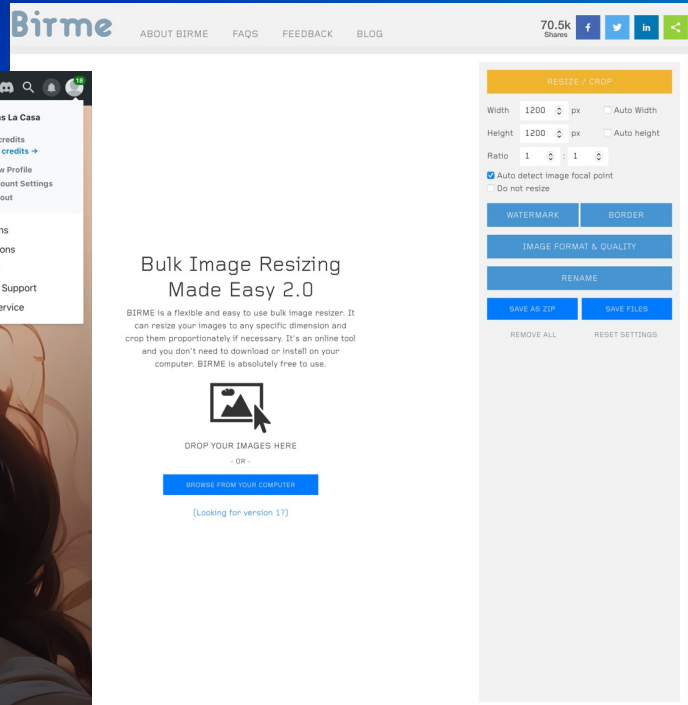
**Microsoft Designer**

<https://designer.microsoft.com/invite?ocid=cmm93xttyvn>



**NightCafe**

<https://creator.nightcafe.studio>



**Birme**

<https://www.birme.net>

A close-up, high-angle shot of a Terminator robot's head. The robot's face is made of dark, metallic plates with visible mechanical details. Its eyes are glowing with a bright red light. The background is a blurred, blue-tinted scene of a city at night, with other robots visible in the distance. The overall mood is menacing and futuristic.

**“I’LL BE BACK,”**