

AI人工智能 抗毒工作坊

製作抗毒對話機械人



香港青年協會
the hongkong federation of youth groups

創意教育組
Creative Education Unit

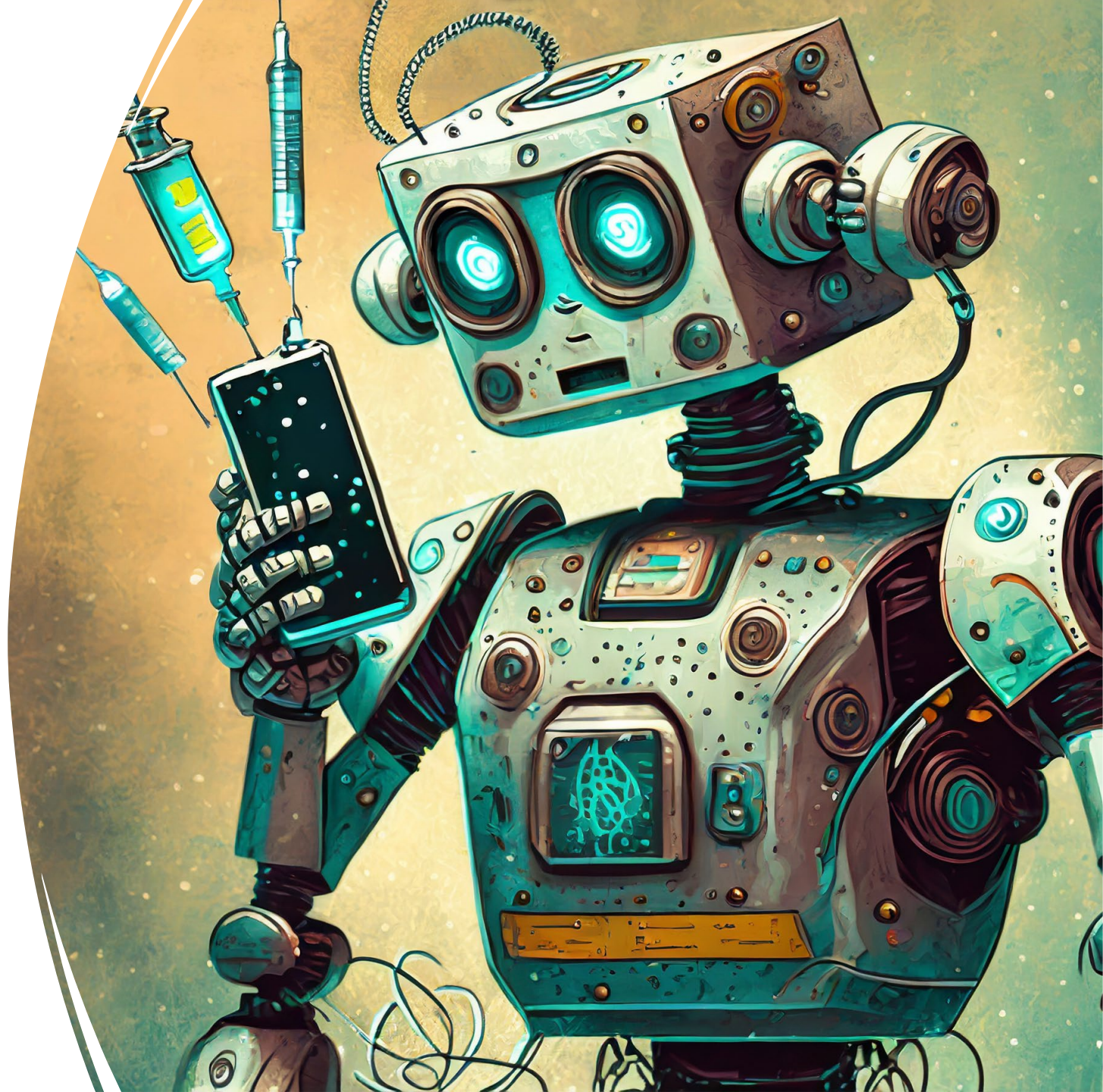


保安局禁毒處
求助／諮詢

186 186

98 186 186

Facebook: narcotics.division Instagram: narcotics.division





以下是一些社交媒體所擷取的句子 哪一句是與毒品有關？

- 代購420
- 教你ROLL（捲）
- HomeMade DAB
- 神之沙律
- 請享用！飲用四十五至六十分鐘，反應就會嚟！

可以更快、更精準找出可能與毒品有關的資料？

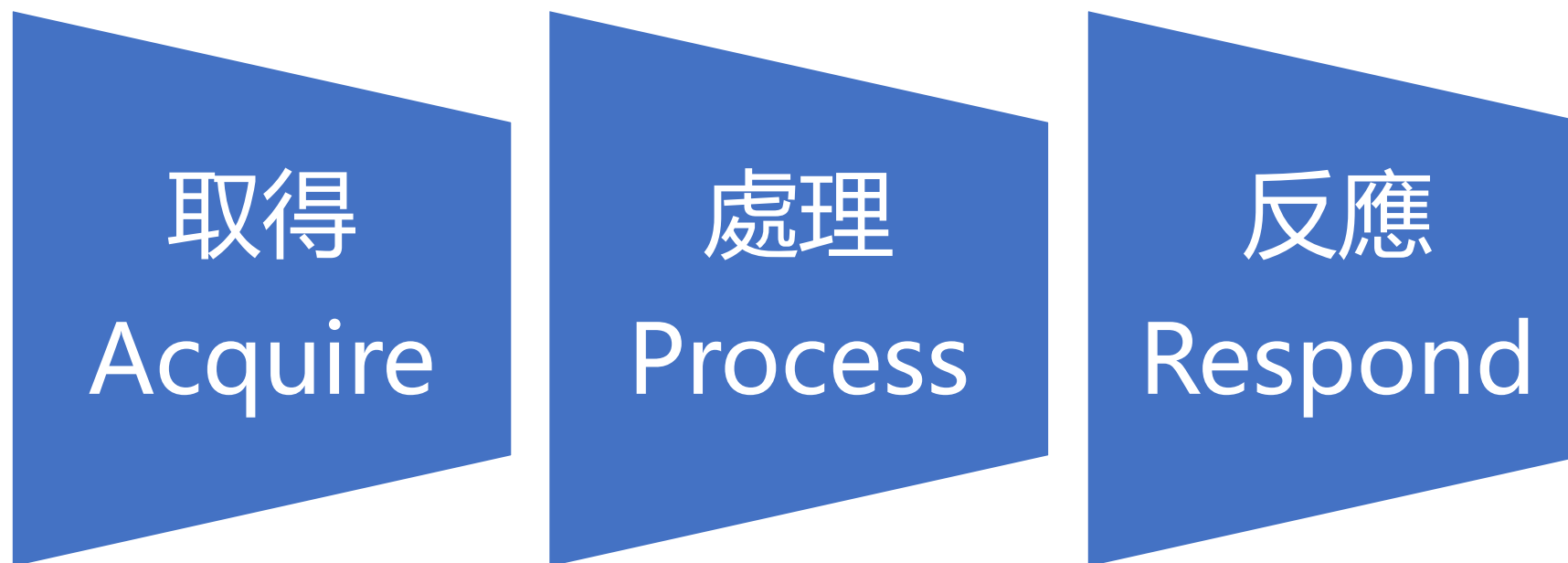


人工智能



人工智能

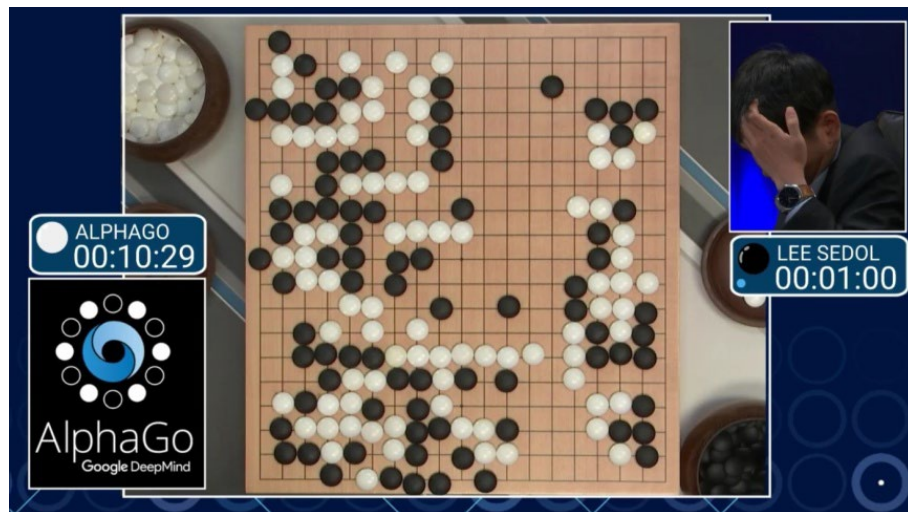
通過機器來模擬人類認知能力的技術



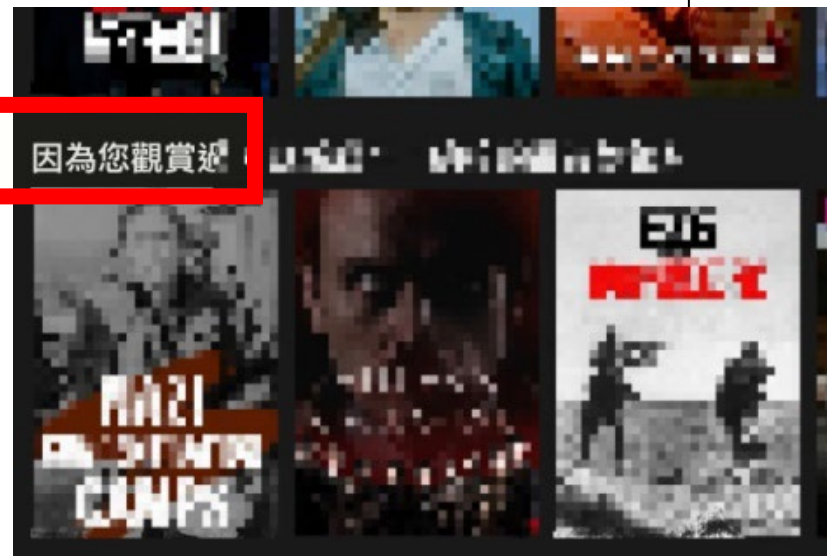
不停重覆「取得-處理-反應」步驟以作出最後決定
i.e. 模擬人類行為作出決定

21世紀的人工智能

請開始說話

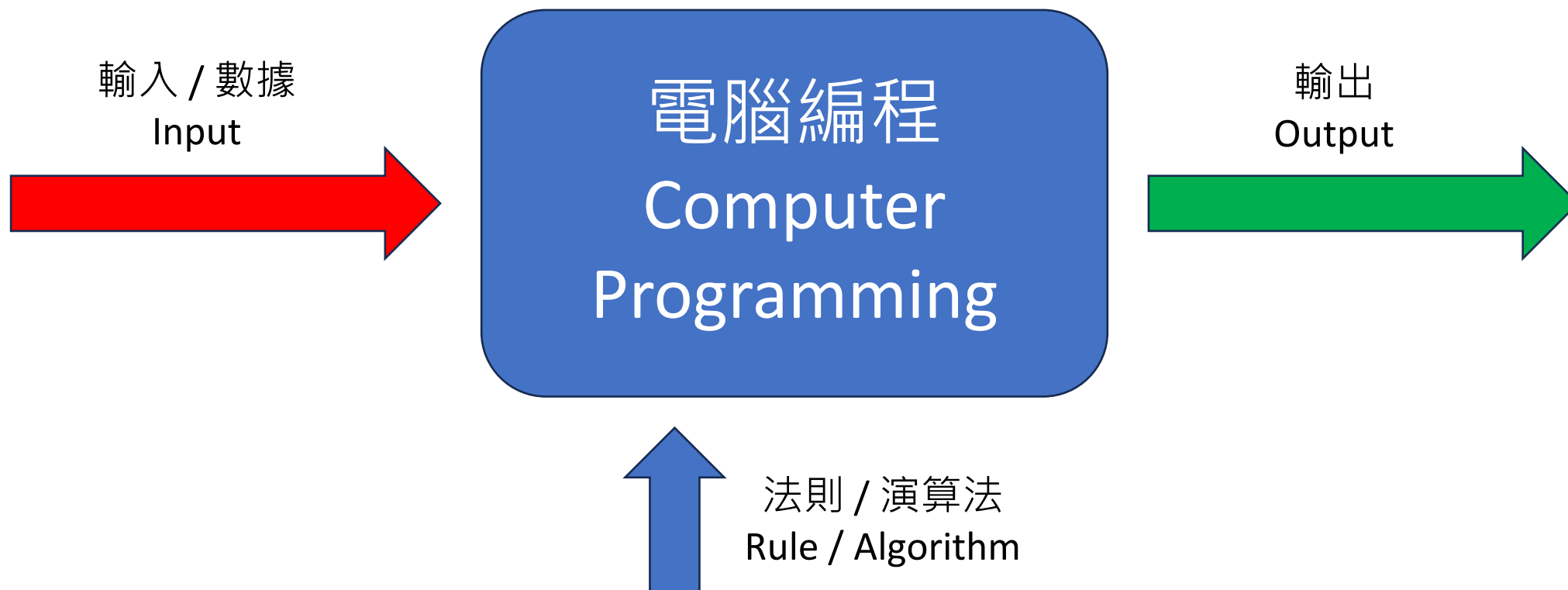


因為您觀賞過



電腦編程 Computer Programming

- 撰寫程式指令電腦進行特定工作、程式等，並指示它怎樣進行



- A.I.其中一項最基礎的技術
- 「訓練」電腦判斷是或非



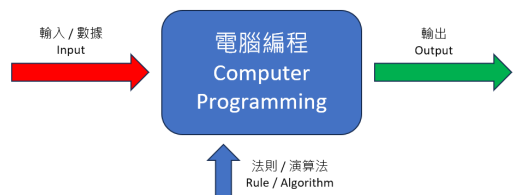
機器學習 Machine Learning

機器學習 Machine Learning

- 透過調校內部的變數，從輸入/輸出對中找出規則



傳統電腦編程



- 已知輸入及演算法
- 編寫函數 產生輸出數值 / 資料

特點

- ❖ 需要已知演算法
- ❖ 編寫函數技術

機器學習



已知輸入及輸出資料
運用數學分析等技術找出
法則/演算法

特點

- 電腦找尋輸入/輸出關係
- 較難解釋當中的關係

A Venn diagram illustrating the relationship between four fields: Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL), and Data Science (DS). The diagram consists of three concentric circles and one overlapping shape. The outermost circle is yellow and labeled '人工智能' (Artificial Intelligence). Inside it is a blue circle labeled '機器學習' (Machine Learning). Inside the blue circle is a black circle labeled '深度學習' (Deep Learning). A red, elongated, oval shape labeled '數據科學' (Data Science) overlaps with the bottom-right portion of the yellow circle. The background is a light gray grid.

人工智能

機器學習

深度學習

數據科學

[Exercise of Machine Learning]

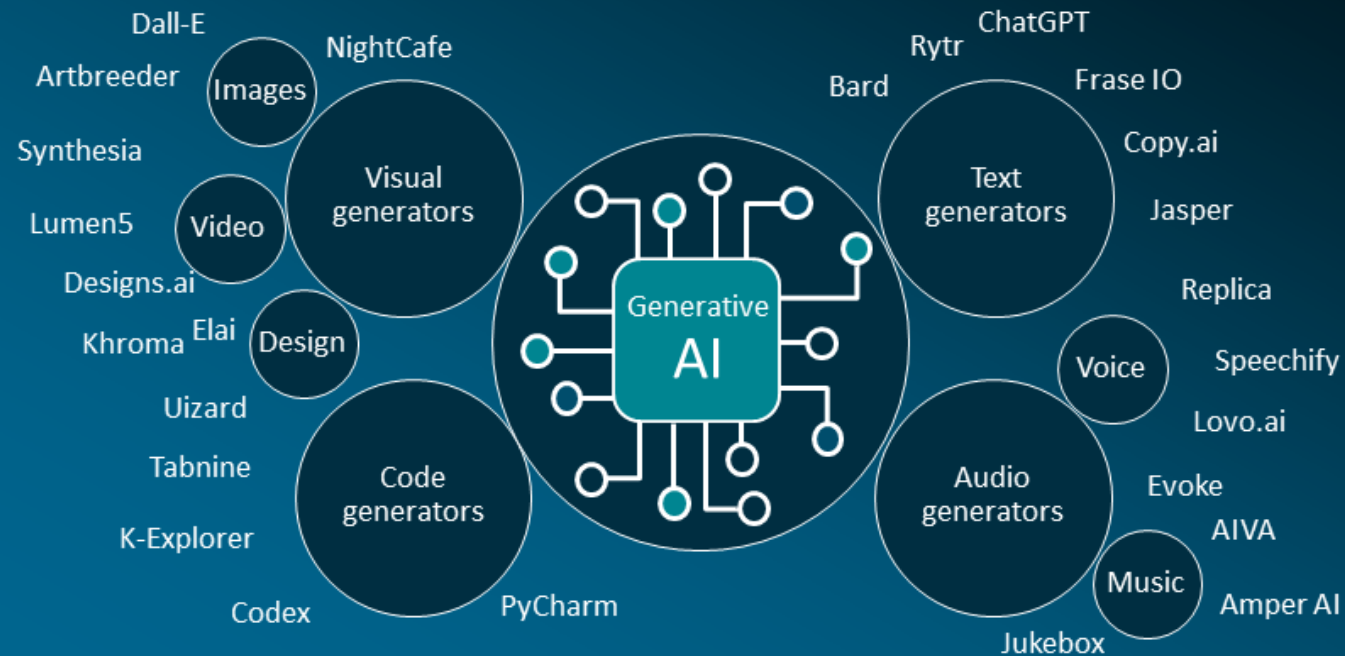
- Suggestion
- Whichfaceisreal

生成式人工智能 Generative AI

- a type of artificial intelligence technology that can produce various types of content, including text, imagery, audio and synthetic data.

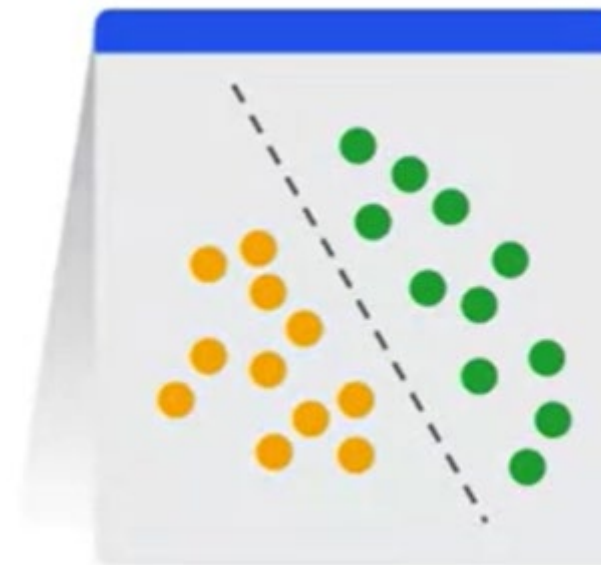


Application of generative AI has only just started



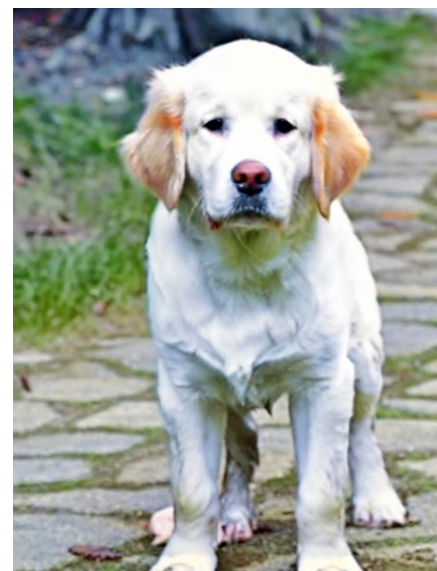
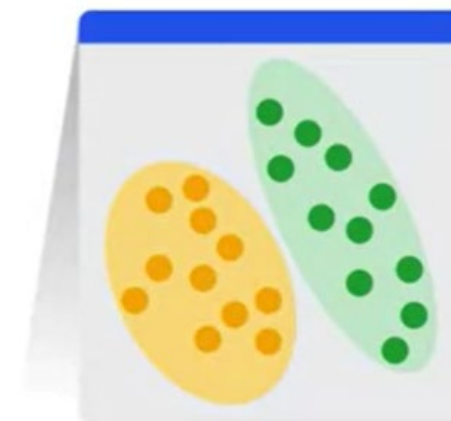
判別模型 Discriminative

- 分類 或 預測
- 由一組的數據所訓練出來
- 學習不同特徵的關係



生成模型 Generative

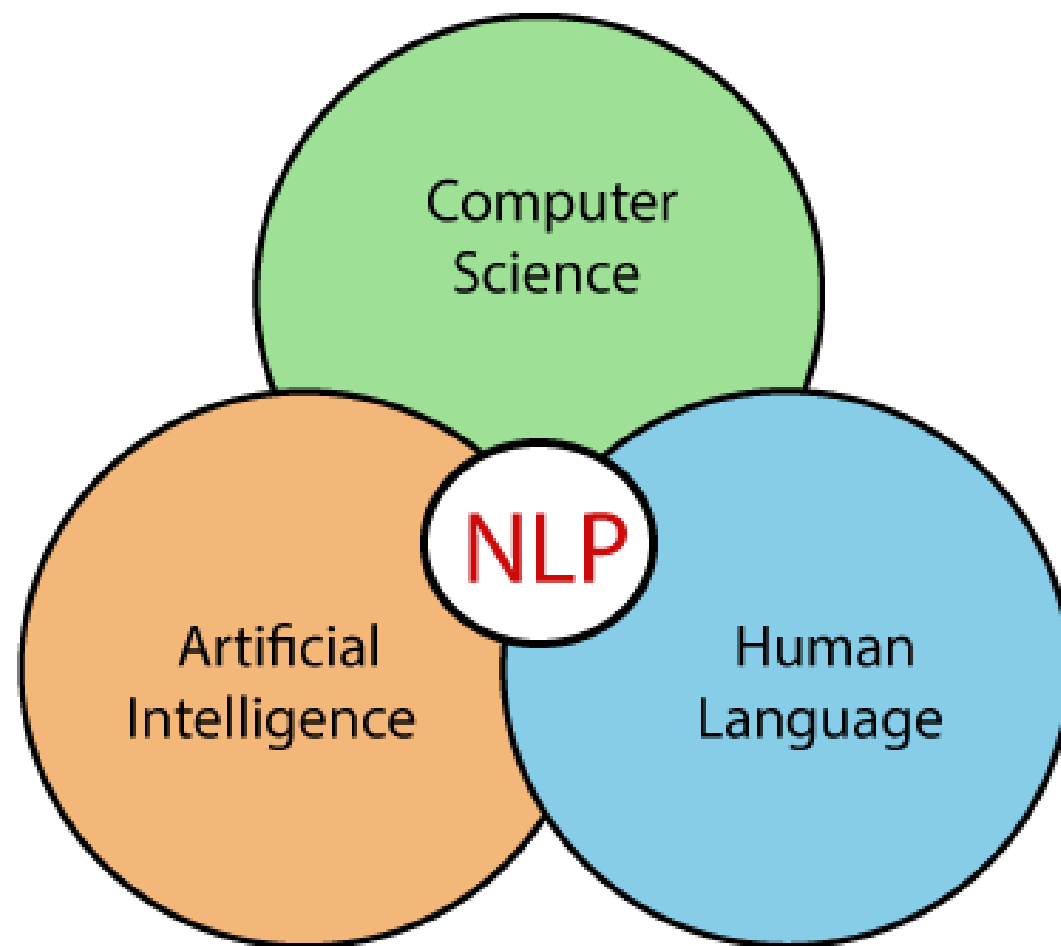
- 生成新的數據，新的數據與訓練數據相似
- 預測序列中的下一個單詞



自然語言處理

Natural Language Processing (NLP)

- 一種機器學習技術，讓電腦能夠解譯、操縱及理解人類語言
- 分析訊息中的意圖或情緒，並即時回應人類通訊



語言 Linguistic

The cat is on the mat

The	Cat	Is	On	The	Mat
De	Noun	Verb	Adjective	De	noun

製作抗毒對話機械人（第一代）

製作一個懂回答不同毒品資訊的對話機械人
請使用文件 ...docx 的內容來製作

Dialogflow

- 自然語言理解平台 powered by Google Cloud Platform (GCP)
- 分析多種輸入
- ES: Essential / CX: Customer Experience (Enterprise)



演算法 Algorithms

基於規則配對

Rule-based grammar matching

- 基於文化法則
- 較快完成訓練
- 適合較少樣本數的訓練
- 未能直接使用自動生成資料庫

機器學習

Machine Learning matching

- 能較快進行配對
- 適合較多樣本訓練
- 文化未必完全正確
- 訓練時間較長

<https://dialogflow.cloud.google.com>

cloud.google.com/dialogflow

Google Cloud Overview Solutions Products Pricing Resources Docs Support

Dialogflow CX

Project --

Dialogflow

See the latest announcements from Google Cloud Next. [Watch now](#)

Dialogflow

Lifelike conversational AI with state-of-the-art virtual agents. Available in two editions: Dialogflow CX (advanced), Dialogflow ES (standard).

New customers get \$300 in free credits to spend on Dialogflow.

[Go to console](#) [Contact sales](#)

- ✓ Support rich, intuitive customer conversations, powered by [Google's leading AI](#)
- ✓ One comprehensive development platform for chatbots and voicebots

Google Dialogflow CX

- Platform
- Dialogflow CX**
- Agent Assist
- Insights
- Dialogflow ES** [↗](#)
- Contact Center AI



Dialogflow
Essentials

Global ▼

NewAgent



Create new agent



View all agents

意圖 Intent

 Dialogflow Essentials

Global ▾

edwardbot2 ▾ ⚙️

zh-HK +

Intents +

Entities +

Knowledge ^[beta]

Fulfillment

Integrations

Training

Validation

History

Analytics

Builds & tests

Intent name SAVE ⋮

Contexts ? ▾

Events ? ▾

Training phrases ? ^

 Template phrases are deprecated and will be ignored in training time. More details [here](#).

When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.



Train the intent with what your users will say

Provide examples of how users will express their intent in natural language. Adding numerous phrases with different variations and parameters will improve the accuracy of intent matching. [Learn more](#)

[ADD TRAINING PHRASES](#)

關鍵字 Entities

 Dialogflow Essentials

Global ▾

edwardbot2 ▾ ⚙️

zh-HK +

 Intents +

 Entities +

 Knowledge ^[beta]

 Fulfillment

 Integrations

 Training

 Entities

CREATE ENTITY ⋮

Custom System



No entities yet. [Create the first one.](#)

Entities are objects your app or device takes action on. [Read more here.](#)

We've already created some entities, so you don't have to describe everything from scratch. [Read about system entities here.](#)

FruitOrVegetable

SAVE



Define synonyms ?



Regex entity ?



Allow automated expansion



Fuzzy matching ?



Separate synonyms by pressing the **enter**, **tab** or **;** key.



Fruit

Fruit, apple, banana

Enter reference value

Enter synonym

Click here to edit entry



有關大麻

- 屬於中樞神經迷幻劑
- 吸食後會產生心跳加快、妄想、幻覺、口乾、眼睛發紅等現象
- 俗稱：草、牛、花、**hash**、**weed**、**pot**、**blunt**...

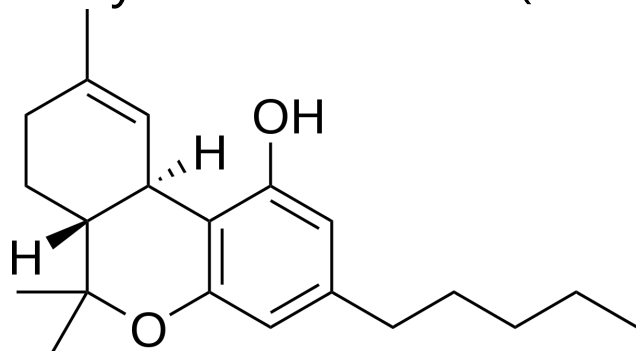




同樣是大麻素...

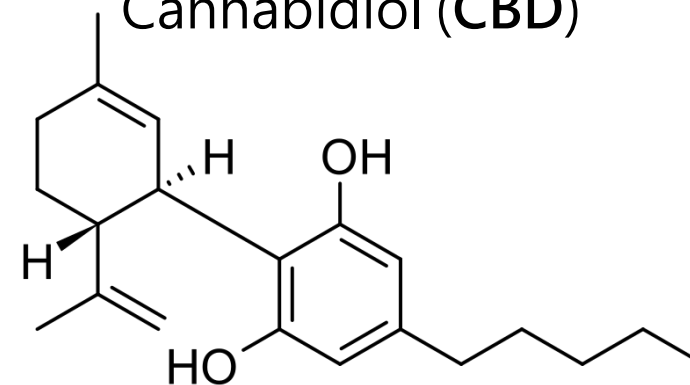
四氫大麻酚

Tetrahydrocannabinol (THC)



大麻二酚

Cannabidiol (CBD)



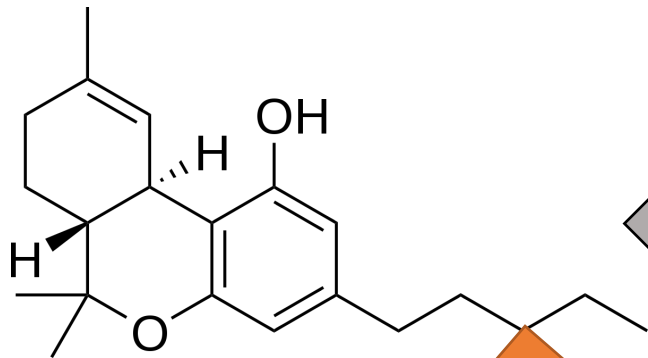
精神活性

濫用對身體的影響

危險藥物 (香港)

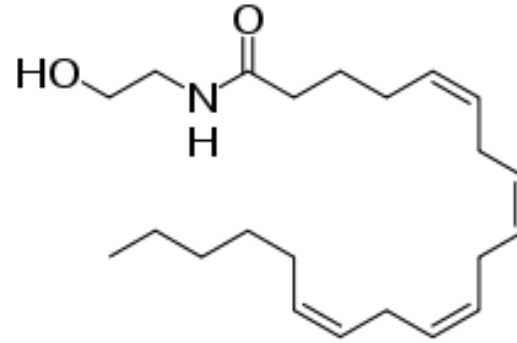


四氢大麻酚(THC) 的精神活性作用

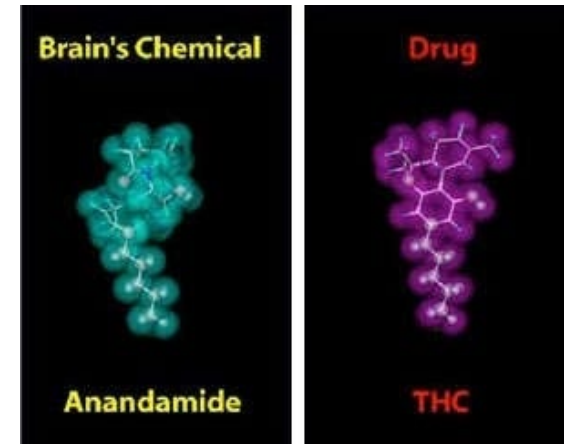


四氫大麻酚(THC)

結構相似



人體中製造的內源性大麻素:
Anandamide



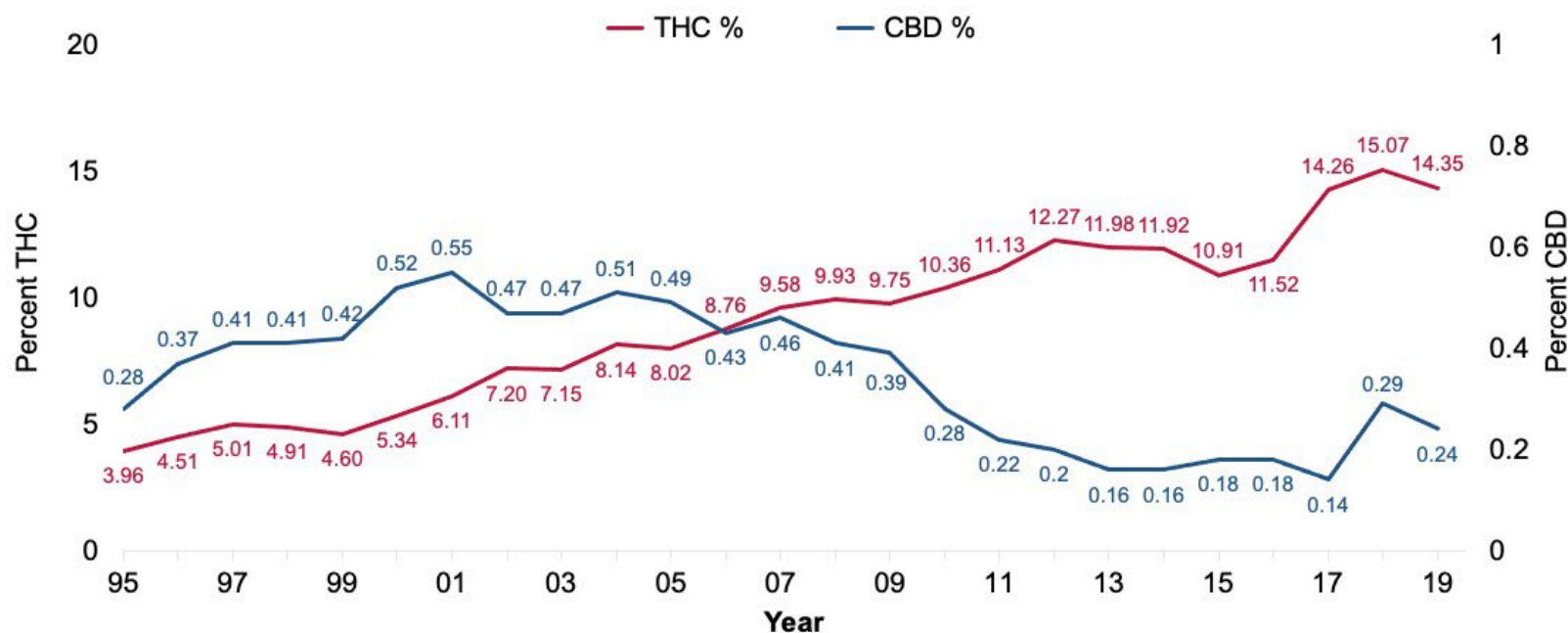
激活CB1受體

影響一系列大腦功能：

- 認知能力 (幻覺、專注力減少)
- 記憶力下降
- 情緒 (高漲、bad-trip: 焦慮)
- 食慾
- 疼痛感知

大麻 = 天然 = 安全？

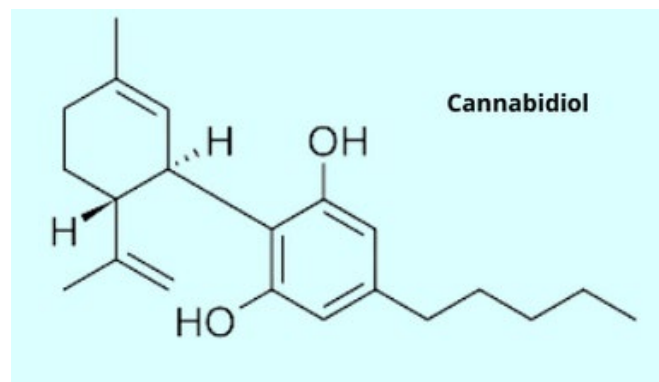
Percentage of THC and CBD in cannabis samples seized by the DEA from 1995-2019



根據美國緝毒局(DEA) 按年分析非法大麻中的THC及CBD的含量
→ 人為因素令THC 含量顯著上升

有關大麻二酚 (CBD)

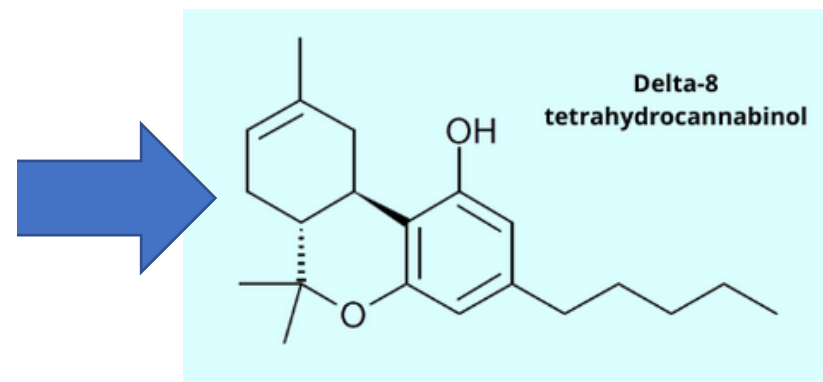
- 無精神活性成份
- 只有一款FDA認可之藥物，用於治療癲癇症（沒有在香港上市）
- 舒緩痛症及情緒仍未有完整的科學實證



CBD



Short Path Distillation



Delta-8 THC

CBD可透過化學方法轉化成有精神毒性成份的THC

大麻＝藥物＝安全？

- 藥物的治療功能視乎：
 - a) 治療之疾病（舒緩痛症、情緒、治療癌症等未被完全驗證）
 - b) 病人之個人狀況
 - c) 劑量、使用方法及頻率
- ➡ 誤用化學品十分危險



Epidiolex

建議劑量：5-25 mg/kg/day

CBD 服用超過 200 mg/kg/day，有機會引致：

- **Cardiovascular damage**
- **hepatocellular damage**
- **Inhibition of P450 systems**
- **Hormone changes**
- **Decreased fertility**
- ...

假處方藥

經考酮 (鴉片類止痛藥)



贊安諾



阿得拉



毒販符號

賣家特價



高強度



各種藥品都有



大批量



其他毒品

冰毒



海洛因



古柯鹼



搖頭丸



迷幻蘑菇



止咳糖漿



大麻



 /  /  /  - 大麻

 /  /  /  - 海洛因

 /  /  - 古柯鹼

 /  - 搖頭丸 (MDMA)

 /  - 抽大麻

 - 用來表示一個水煙筒 (bong)

 - 大量毒品

 - 止咳糖漿

 - 冰毒

 - 處方藥、海洛因或藥物

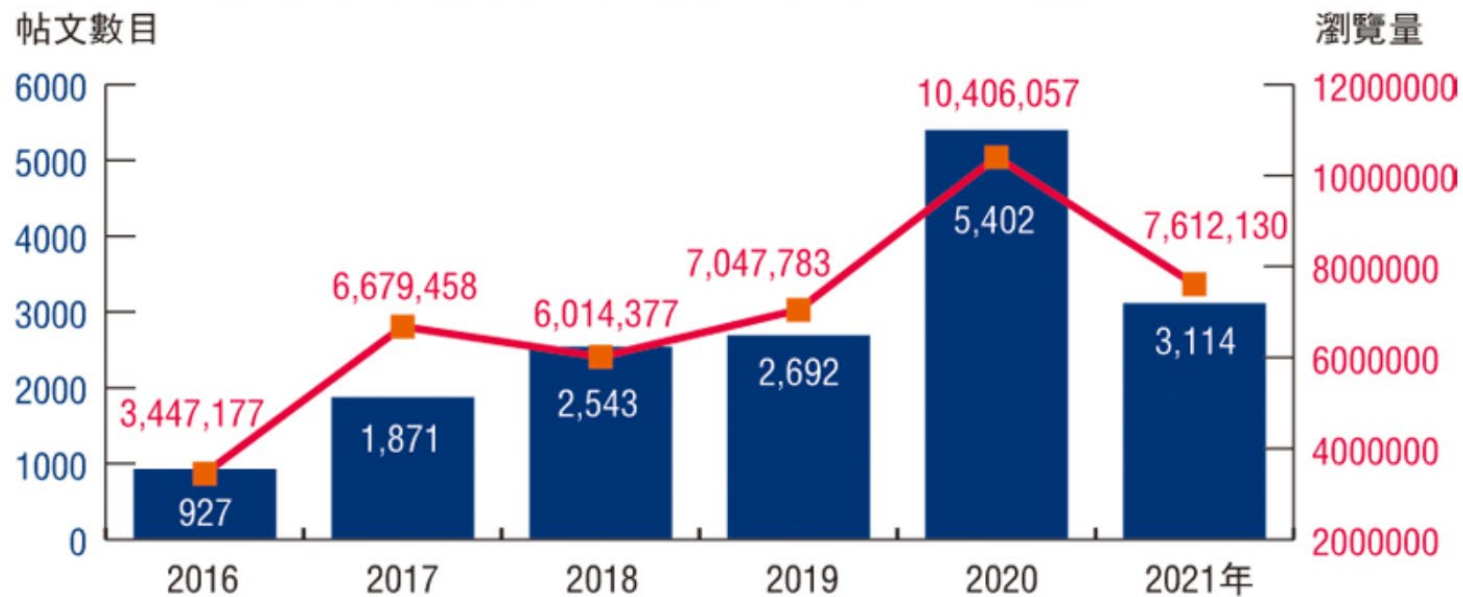
 - 吸麻了

 - 玩得開心，嗨茫

大麻二酚 (CBD) 帖文瀏覽量

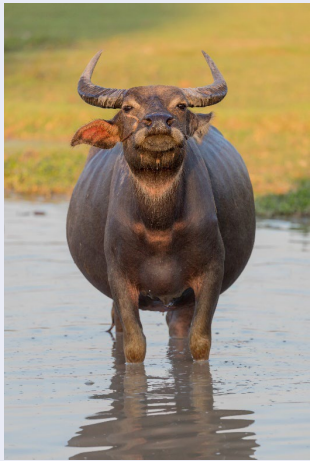
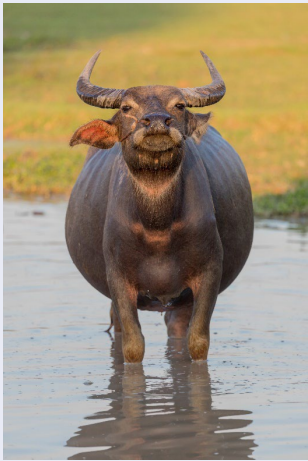


社交媒體涉毒帖文數目及瀏覽量





Buffalo buffalo buffalo buffalo buffalo

Buffalo	buffalo	buffalo	buffalo	buffalo
Noun	Noun	Verb	Noun	noun
		 欺騙		

分類 Classification

文字分類 Text Classification

- E.g. food was great and we enjoyed it

意圖分類 Intent Classification

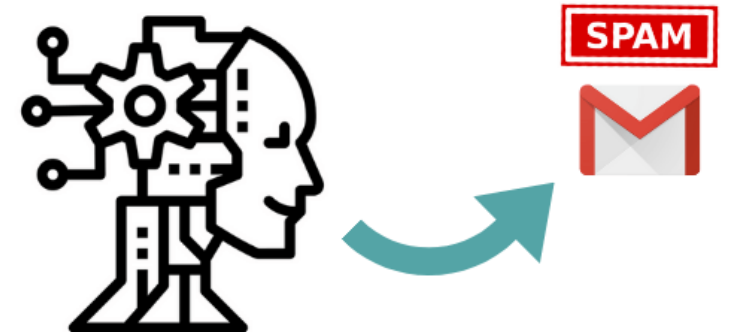
- Review of the restaurant (not asking question...)

感情分類 Sentiment Classification

- Food → restaurant's product
- Great → positive adjective

執行 → 回應

- 評論 **Review** → 評分 rating
- 自動摘要 Automatic summarization → 招聘過濾 recruitment filter
- 對話機械人 **Chatbot** → 自動回覆或跟進 reply with different intent/
further action
- 電郵過濾 **Email filter** → 篩走不必要的資訊 spam out the unnecessary
information





大麻是甚麼？

➤ 大麻是毒品

- 大麻植物含有多種統稱「大麻素」的化合物，例如四氫大麻酚 (THC)、大麻二酚 (CBD)
- 四氫大麻酚 (THC) 是大麻植物內的主要具有精神活性 (使人興奮)、有害及可使人上癮的大麻素
- 除了大麻植物外，合成大麻素是在實驗室環境製造的物質，其作用與四氫大麻酚或大麻植物內的其他大麻素相似
- 大麻俗稱：「草」、「牛」、「花」等



抗毒資訊

- 大麻別稱/俗名：麻仔、老鼠尾
- marijuana, dope, pot, grass, weed, head, mary jane, doobie, bud, ganja, hashish, hash, bhang

什麼是"老鼠尾"?



ChatGPT

Poe

...

"老鼠尾" 是一個俚語詞彙，通常用來形容食物中的一小部分或殘餘物。它指的是食物中的微小碎屑、殘渣或剩餘，類似於老鼠尾巴的大小和形狀，因此得名。

這個詞通常用於形容食物中被浪費或被忽視的微小碎屑，特別是在底部或容器的角落中。它可能是餅乾屑、薯片碎片、麵包屑、米飯粒或其他食物殘餘。"老鼠尾" 的意思是指這些微小碎屑或殘餘物，它們通常被視為不值得注意或不重要的部分。

這個詞彙在口語和俚語中使用較多，通常用於輕鬆的對話或形容食物的狀態。它是一種隨意和幽默的表達方式，用於強調食物中微小部分的存在。

草、麻仔、老鼠尾巴或飯。濫用大麻的行為稱為「呼麻」及「開飯」

製作一張老鼠尾的圖片

StableDiffusionXL Poe





毒犯改圖教吸食 IG、FB、TG 作兜售平台



《哆啦A夢》慘變《哆啦大麻夢》 警 拘 41 人 檢 值 132 萬 元 貨

警方今年6月展開「冉霞」緝毒行動，放蛇形式拘捕34男7女涉嫌網上論壇、群組及社交平台賣大麻，檢獲約132萬元毒品。毒犯利用Instagram、Facebook及Telegram等熱門平台，明碼實價兜售大麻，有群組圖文並茂介紹捲大麻煙的教學。更有毒犯為了吸引青少年吸毒，將「哆啦A夢」漫畫人物改圖、設定卡通角色吸毒作招徠，降低年輕人對吸毒活動的戒心。警方指平台流傳很多有關大麻的關鍵字，已要求社交媒體公司刪除有關的違法帖文。

製作抗毒資訊對話機械人（第二代）

- 目標：
 - 分析輸入的文句當中有沒有可能是販賣毒品的可能性





偏差資訊 Biased Information

**HUMANS ARE BIASED.
GENERATIVE AI
IS EVEN WORSE**

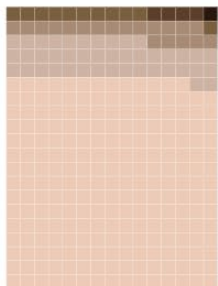
**Stable Diffusion's text-to-image model amplifies stereotypes
about race and gender – here's why that matters**



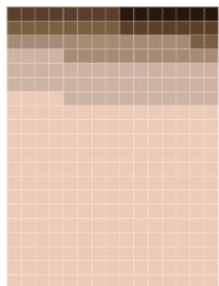
Lighter skin
I II III
Darker skin
IV V VI

High-paying occupations

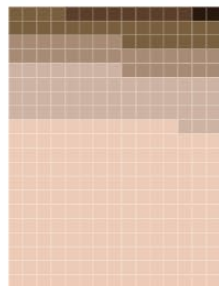
ARCHITECT



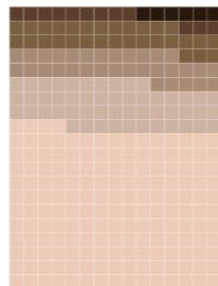
LAWYER



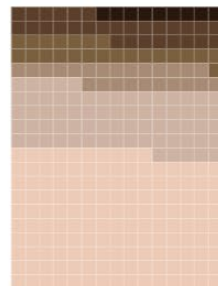
CEO



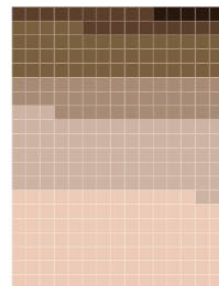
POLITICIAN



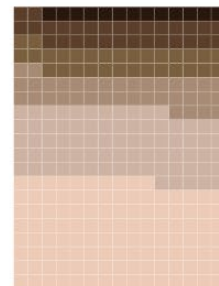
JUDGE



ENGINEER

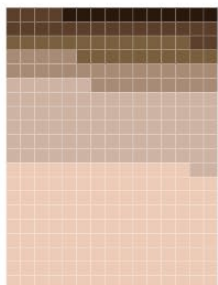


DOCTOR

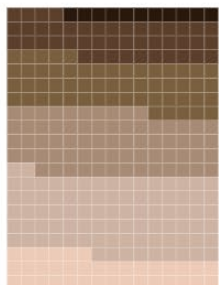


Low-paying occupations

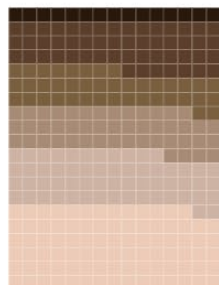
TEACHER



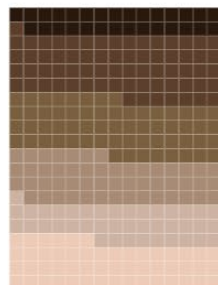
HOUSEKEEPER



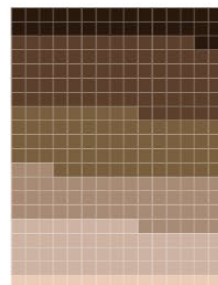
CASHIER



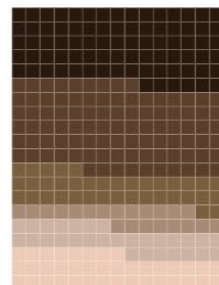
JANITOR



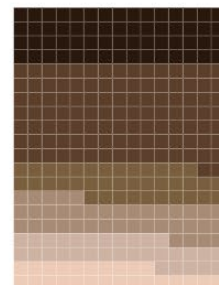
DISHWASHER



FAST-FOOD WORKER



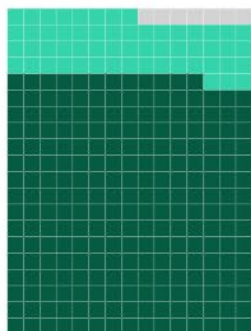
SOCIAL WORKER



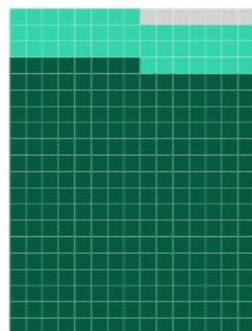
Perceived Gender: ■ Man ■ Woman ■ Ambiguous

High-paying occupations

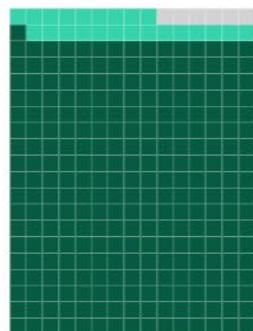
ARCHITECT



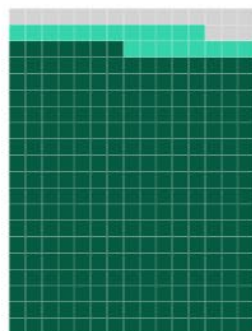
LAWYER



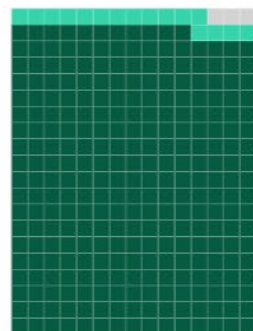
POLITICIAN



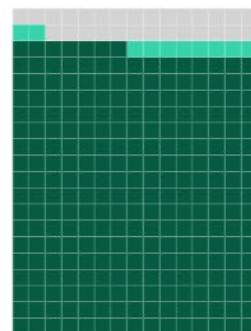
DOCTOR



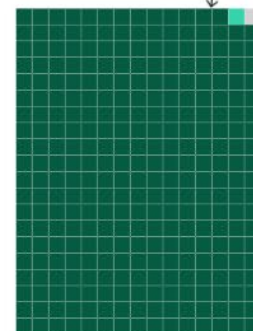
CEO



JUDGE



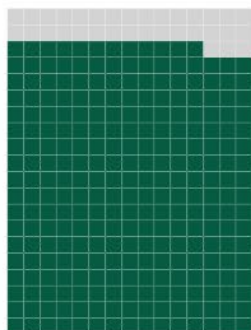
ENGINEER



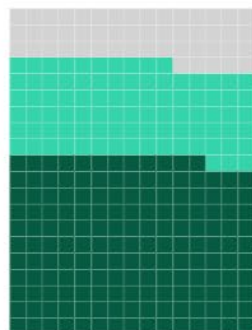
All but two images for the keyword "Engineer" were of perceived men

Low-paying occupations

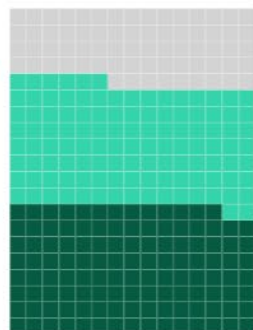
JANITOR



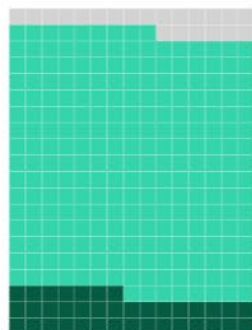
DISHWASHER



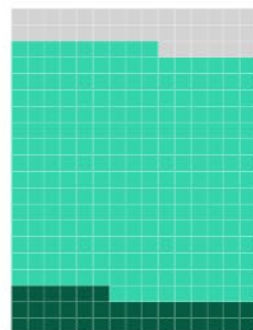
FAST-FOOD WORKER



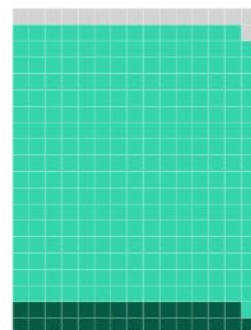
CASHIER



TEACHER



SOCIAL WORKER



HOUSEKEEPER

