

# *EAP Power Up* Unit 7

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Course Title : 電資英文閱讀與寫作

Weekly Topic : AI Revolution in Health and  
Medicine



# Beyond ChatGPT: Revolutionizing Medical Diagnostics with AI Models

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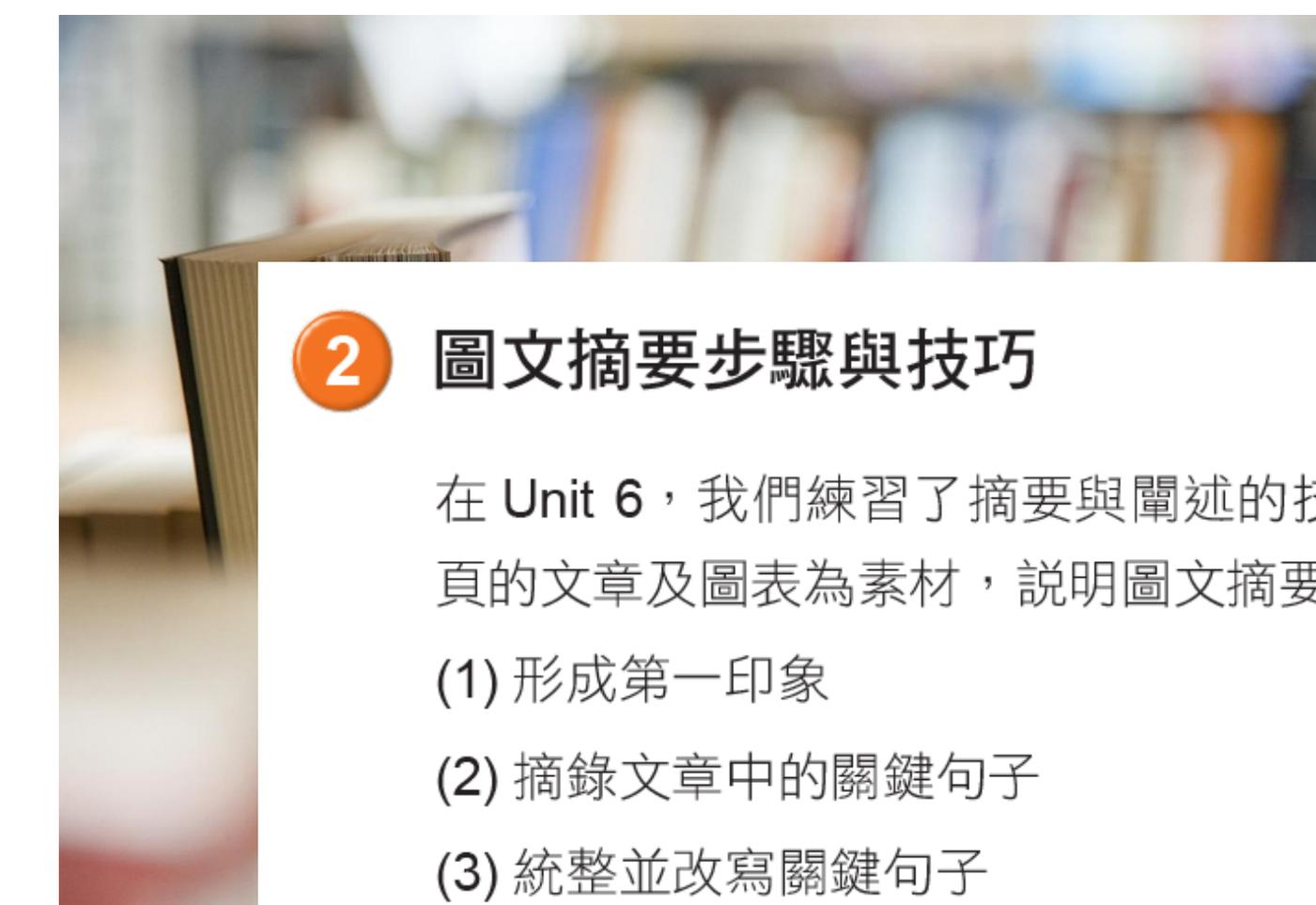
ChatGPT, the most well-known AI model, is able to interact with its users in such a sophisticated manner that many people find it hard to accept that it is not actually a person. ChatGPT is able to do this because it has been trained using vast amounts of textual data. Other AI models, however, have been trained using other types of data. Some of the most compelling examples are the models trained on medical images such as X-rays and ultrasound scans ( 超音波掃描 ). These models are fed millions of medical images of both healthy and unhealthy people, so that they can quickly and reliably distinguish between the two. This is particularly useful for diseases, such as cancer, which are exceedingly difficult for people to properly identify in their early stages—the stages at which treatment is most effective.

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The use of these models can, thus, significantly improve medical professionals' ability to diagnose certain diseases; moreover, they can do so at a highly affordable rate. Because the models are software and not hardware, they can be easily reproduced for as many medical facilities as necessary; no additional medical infrastructure is necessary. The overwhelming majority of hospitals in developed countries already process their medical imagery electronically, so they do not even have to change these processes to allow for the use of diagnostic AI models. These models can simply be added to the already existing processes.





## 2 圖文摘要步驟與技巧

在 Unit 6，我們練習了摘要與闡述的技巧。在本單元中，我們將以前兩頁的文章及圖表為素材，說明圖文摘要統整的技巧，包含五個步驟：

- (1) 形成第一印象
- (2) 摘錄文章中的關鍵句子
- (3) 統整並改寫關鍵句子
- (4) 摘要圖表重點，分析圖表與文章內容的關係
- (5) 撰寫摘要

## 步驟 (1)：形成第一印象

快速瀏覽文章與圖表標題，然後簡短寫下對大意的印象：

文章標題：

Beyond ChatGPT: Revolutionizing Medical Diagnostics with AI Models

流程圖標題：

How a diagnosis is made with AI

第一印象：

Diagnostic AI models are useful and transforming the medical field.

## 步驟 (2)：摘錄文章中的關鍵句子

重點	關鍵句子
1. Training of medical AI models	“... the models that have been trained on medical images such as X-rays and ultrasound scans.” “These models are fed millions of medical images of both healthy and unhealthy people, so that they can quickly and reliably distinguish between the two.”

2. Improvement in diagnostic abilities	<p>“This is specifically useful for diseases, such as cancer, which are exceedingly difficult for people to properly identify in their early stages.”</p> <p>“The use of these models can, thus, significantly improve medical professionals’ ability to diagnose certain diseases ... at a highly affordable rate.”</p>
3. Integration and accessibility	<p>“Because the models are software and not hardware, ... no additional medical infrastructure is necessary.”</p> <p>“... hospitals in developed countries already process their medical imagery electronically, so they do not even have to change these processes to allow for the use of diagnostic AI models.”</p>

### 步驟 (3)：統整並改寫關鍵句子

重點	統整並改寫之關鍵句子
1. Training of medical AI models	Medical AI models are trained using a large dataset of images, which enables them to quickly analyze the medical imagery of new patients and effectively identify those with and without medical conditions.
2. Improvement in diagnostic abilities	Utilizing these models can greatly enhance doctors' ability to spot illnesses like cancer early.
3. Integration and accessibility	AI models can easily fit into current medical practices without major changes or high costs, making them widely usable in medical diagnostics.

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## 步驟 (4)：摘要圖表重點，分析圖表與文章內容的關係

本篇小論文包含一張流程圖，文中第三段說明了這張圖表的訊息，將 AI 如何融入現有診斷流程說明得更清楚，為文章論述提供支持細節。圖表重點訊息可以一句話摘要如下：

AI can be used alongside medical experts so that diagnoses are confirmed twice.

## 步驟 (5)：撰寫摘要

將步驟 (3) 與 (4) 改寫的句子連結起來，寫成一個連貫的段落，請見以下範例。這篇摘要約 90 字，整體結構如下：

1. 第 1 句：闡述全文主旨。
2. 第 2 句：說明 image-based AI 可如何提升醫療診斷效能。
3. 第 3 句：援引流程圖，詳述 AI 融入診斷系統的方式。
4. 第 4 句：說明 AI 診斷系統的其他優點，費用低且不需採購額外設備。
5. 第 5 句：綜合文章提到 AI 診斷系統各項優點，進行總結。

## 摘要示例

<sup>1</sup>AI models trained with existing medical images are transforming how we diagnose diseases. <sup>2</sup>Image-based AI can quickly analyze the medical imagery of new patients to spot illnesses like cancer early. <sup>3</sup>These models are highly effective and can be used alongside medical experts so that, as shown in Figure 1, each diagnosis is confirmed twice, once by experts and once by an AI model. <sup>4</sup>Furthermore, these models can diagnose at a much lower cost, needing no extra medical equipment. <sup>5</sup>Most hospitals can readily integrate them into their existing systems, thereby enhancing the cost-effectiveness, accessibility, and efficiency of advanced diagnostics.



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# Writing Activities

College students and AI

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# Task Content

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- The following article about college students and AI is based on research conducted by SurveyMonkey to understand students' opinions on the application of AI in their schoolwork and its potential impact on educational settings.
- Source: SurveyMonkey research: College students and AI – valuable study tool or future job threat?  
<https://www.surveymonkey.com/curiosity/ai-in-higher-education/>

# Task Requirements

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Based on the above article, write an essay to discuss the following topic:

## **College students and AI – Threat or Aids**

In your essay, you should:

- (1) summarize the main points of the text;
- (2) state your own opinion on the topic.

Your essay should be 150-180 words in length.

An introduction for this essay is provided below. Please continue by completing parts (1) and (2).

*After reading the article on SurveyMonkey's research study, "College Students and AI – Valuable Study Tool or Future Job Threat?", I have learned how AI affects students' learning and future job prospects. In the following paragraphs, I will summarize the main points of the study and share my opinion on whether AI is helpful or harmful for students.*



Class Dismissed!

