



# 敏實科技大學 × 人工智慧專業大學

MINTH UNIVERSITY OF SCIENCE AND TECHNOLOGY

人工智慧實驗室簡報 費建一老師 2022.10.27





# 人工智慧實驗室介紹

- 設立目的
  - 提供學生研究與學習人工智慧相關軟體的優質環境
- 主要教學設備
  - 硬體：30台個人電腦含office及廣播教學系統
  - 軟體：RapidMiner Studio資料分析、WITNESS Horizon生產模擬、Anaconda Navigator、微軟visual studio、python IDE
- 配合課程
  - 人工智慧導論、Python程式設計、深度(機器)學習
- 相關證照
  - IPAS機器學習工程師
  - NVIDIA深度學習相關證照
  - RapidMiner相關證照



# 人工智慧教學

- 李飛飛Ted演講教導電腦看懂圖像
- AI Experiments
- Teachable Machine
- Rapidminer 實習
- A Neural Network Playground
- 辨識案例
- 推薦系統
- 政府資料開放平臺



# 教學學生成果

- [Teachable Machine](#) 學生實作紀錄
- [Rapidminer](#) 學生實作紀錄
- [Python](#) 程式設計學生實作紀錄
- 學生專題
  - [智慧安防](#)
  - [智慧園丁](#)
  - [智慧會議室](#)





敏實科技大學 人工智慧專業大學  
RNN追蹤烘豆機爐內溫度

烘豆機AIOT整合架構



```
Epoch: 1, Loss: [[2350935.69278512]], Val Loss: [[927696.52594006]]
Epoch: 2, Loss: [[73963.05360936]], Val Loss: [[29291.40535965]]
Epoch: 3, Loss: [[229.58037859]], Val Loss: [[60.38007568]]
Epoch: 4, Loss: [[218.2121555]], Val Loss: [[58.35405614]]
Epoch: 5, Loss: [[210.4298208]], Val Loss: [[56.06385564]]
Epoch: 6, Loss: [[203.107395]], Val Loss: [[53.8821175]]
Epoch: 7, Loss: [[196.10689658]], Val Loss: [[51.80104497]]
Epoch: 8, Loss: [[189.40832203]], Val Loss: [[49.8150588]]
Epoch: 9, Loss: [[182.99551857]], Val Loss: [[47.91898758]]
Epoch: 10, Loss: [[176.85337802]], Val Loss: [[46.10798241]]
Epoch: 11, Loss: [[170.96771524]], Val Loss: [[44.3774935]]
Epoch: 12, Loss: [[165.32520474]], Val Loss: [[42.72324973]]
Epoch: 13, Loss: [[159.91332288]], Val Loss: [[41.14123973]]
Epoch: 14, Loss: [[154.72029434]], Val Loss: [[39.62769441]]
Epoch: 15, Loss: [[149.73504253]], Val Loss: [[38.17907075]]
Epoch: 16, Loss: [[144.9471435]], Val Loss: [[36.79203676]]
Epoch: 17, Loss: [[140.34678334]], Val Loss: [[35.46345751]]
Epoch: 18, Loss: [[135.92471843]], Val Loss: [[34.19038224]]
Epoch: 19, Loss: [[131.6722387]], Val Loss: [[32.97003234]]
Epoch: 20, Loss: [[127.5811334]], Val Loss: [[31.79979015]]
Epoch: 21, Loss: [[123.64365928]], Val Loss: [[30.67718866]]
Epoch: 22, Loss: [[119.85251102]], Val Loss: [[29.59990182]]
Epoch: 23, Loss: [[116.20079369]], Val Loss: [[28.56573559]]
Epoch: 24, Loss: [[112.68199715]], Val Loss: [[27.57261962]]
Epoch: 25, Loss: [[109.28997214]], Val Loss: [[26.61859946]]
```

```
import numpy as np
import matplotlib.pyplot as plt
import math
sin_wave = np.array([math.sin(x/40) for x in np.arange(400)])

X = []
Y = []

seq_len = 2
num_records = len(sin_wave) - seq_len

for i in range(num_records - seq_len):
    X.append(sin_wave[i:i+seq_len])
    Y.append(sin_wave[i+seq_len])

X = np.array(X)
X = np.expand_dims(X, axis=2)

Y = np.array(Y)
Y = np.expand_dims(Y, axis=1)

X.shape, Y.shape

X_val = []
Y_val = []
```

