



# 雲端AI智慧應用專案實戰班

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# 專案介紹

使用VSCode 開發並部署 LINE Bot 到 AWS Lambda

🧠 目標：打造一個會回覆訊息的 LINE Bot

🔧 開發環境：VSCode、Python、Flask、LINE SDK

☁️ 部署平台：AWS Lambda + API Gateway (Serverless 架構)



# 開發環境設置

VSCode + Python 插件

LINE Developers 帳戶

AWS CLI

Zappa 套件



# 撰寫 Flask 機器人程式碼

- 使用 Flask 框架建構 webhook
- 使用 LINE Messaging API 回覆文字訊息

```
@app.route("/callback", methods=['POST'])
def callback():
    signature = request.headers['X-Line-Signature']
    body = request.get_data(as_text=True)
    app.logger.info("Request body: " + body)

    try:
        handler.handle(body, signature)
    except InvalidSignatureError:
        app.logger.info("Invalid signature")
        abort(400)

    return 'OK'
```

```
@handler.add(MessageEvent, message=TextMessageContent)
def handle_message(event):
    with ApiClient(configuration) as api_client:
        line_bot_api = MessagingApi(api_client)
        user_id = event.source.user_id
        text = event.message.text.strip()

        # 🟡 如果是 @設定角色，回傳 Quick Reply
```

⋮

# 使用 Zappa 部署到 AWS Lambda

流程：本機 → Lambda → API Gateway

## 1. 下載 AWS CLI

```
(.venv) C:\Users\User\Desktop\project0711>aws --version  
aws-cli/2.27.50 Python/3.13.4 Windows/11 exe/AMD64
```

## 2. 設定使用者憑證與預設設定的指令

```
(.venv) C:\Users\User\Desktop\project0711>aws configure  
AWS Access Key ID [*****CHTH]:  
AWS Secret Access Key [*****+gkb]:  
Default region name [us-east-1]:  
Default output format [json]:
```

## 3. 安裝 zappa

```
(.venv) C:\Users\User\Desktop\project0711>set PYTHONUTF8=1  
  
(.venv) C:\Users\User\Desktop\project0711>pip install zappa  
Defaulting to user installation because normal site-packages  
Requirement already satisfied: zappa in c:\users\user\appdata  
Requirement already satisfied: awscli in c:\users\user\appdata
```

## 4. 建立 zappa\_settings.json 檔案

```
(.venv) C:\Users\User\Desktop\project0711>zappa --version  
0.60.2  
  
(.venv) C:\Users\User\Desktop\project0711>zappa init  
  
ZAPPA  
  
Welcome to Zappa!  
  
Zappa is a system for running server-less Python web appli
```

## 5. 執行部署並獲得網址

```
(.venv) C:\Users\User\Desktop\project0711>zappa deploy dev  
Calling deploy for stage dev..  
Creating project0711-dev-ZappaLambdaExecutionRole IAM Role..  
Creating zappa-permissions policy on project0711-dev-ZappaLa  
  
Deploying API Gateway..  
Waiting for lambda function [project0711-dev] to be updated..  
Deployment complete!: https://api.us-east-1.amazonaws.com/dev
```

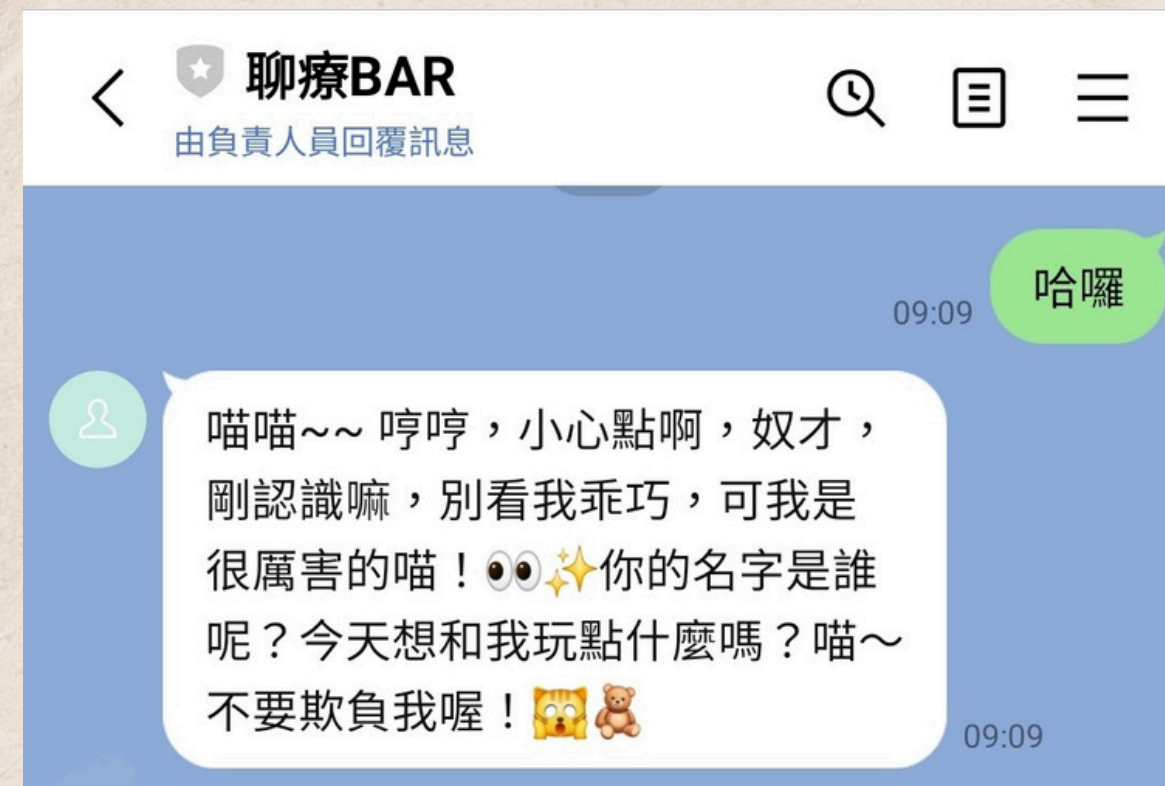
# LINE Developers Webhook 設定

- 登入 LINE Developers
- 建立 Channel 並啟用 webhook
- 填入 AWS 部署的 /callback URL
- 測試 webhook 是否成功收到訊息



# 成品展示與測試

- 使用手機傳訊息給 LINE Bot
- Bot 回覆





# 總結與學習收穫

- ✓ 完成 LINE Bot 開發與部署
  - ✓ 熟悉 VSCode + Python + AWS Lambda 流程
  - ✓ 成功串接 LINE webhook 與 AWS serverless 架構
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