

```
# -*- coding: utf-8 -*-
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"""
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```
Created on Thu Mar 13 15:11:12 2025
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@author: User
```

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"""
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```
import requests
```

```
import pandas as pd
```

```
import datetime # noqa: F401
```

```
# 設定 API 參數
```

```
API_KEY = '' # 替換為您的 API Key
```

```
FROM_CURRENCY = 'CNY' # 人民幣
```

```
TO_CURRENCY = 'TWD' # 目標貨幣（可改為 'TWD'）
```

```
URL =
```

```
f"https://www.alphavantage.co/query?function=FX_DAILY&from_symbol={FROM_CURRENCY}&to_symbol={TO_CURRENCY}&apikey={API_KEY}&outputsize=compact"
```

```
# 發送請求
```

```
response = requests.get(URL)
```

```
data = response.json()
```

```
# 提取匯率數據
```

```
exchange_rates = data.get("Time Series FX (Daily)", {})
```

```
# 轉換為 DataFrame
```

```
df = pd.DataFrame.from_dict(exchange_rates, orient='index')
```

```
df.index = pd.to_datetime(df.index) # 轉換索引為日期
```

```
df = df.sort_index(ascending=False) # 按日期排序
```

```
#df = df[['4. close']].rename(columns={'4. close': 'Exchange Rate'}) # 只保留收盤價（匯率）
```

```
# 取得最近 5 天數據
```

```
recent_5_days = df.head(5)
```

```
min_val=recent_5_days.values.min()
```

```
last_min_val=recent_5_days.iloc[0].values.min()
```

```
last_min_val=min_val
```

```

if (last_min_val==min_val):
    import smtplib
    from email.mime.multipart import MIMEMultipart
    from email.mime.text import MIMEText
# Gmail 設定
    SMTP_SERVER = "smtp.gmail.com"
    SMTP_PORT = 587
    GMAIL_USER = "" # 你的 Gmail
    GMAIL_APP_PASSWORD = "" # 你的應用程式密碼
# 設定收件人
    recipient = ""
# 設定郵件內容
    msg = MIMEMultipart()
    msg['From'] = GMAIL_USER
    msg['To'] = recipient
    msg['Subject'] = "這是一封匯率通知郵件"
# 郵件正文
    today=pd.to_datetime("today").date()
    today_str=today.strftime("%Y-%m-%d")
    body = "目前人民幣匯率 5 天最低價"+today_str+str(min_val)
    msg.attach(MIMEText(body, 'plain'))

    try:
# 連接到 Gmail SMTP 伺服器
        server = smtplib.SMTP(SMTP_SERVER, SMTP_PORT)
        server.starttls() # 啟用 TLS 加密
        server.login(GMAIL_USER, GMAIL_APP_PASSWORD) # 登入 Gmail
        text = msg.as_string() # 轉換成郵件格式
        server.sendmail(GMAIL_USER, recipient, text) # 發送郵件
        server.quit() # 關閉連線
        print("郵件發送成功！")
    except Exception as e:
        print("發送失敗，錯誤訊息：", e)
        print("min values in the last day")
else:
    print("min values not in the last day")
print(recent_5_days)
print(min_val, last_min_val)

```