

# 航班準時率分析程序使用說明

Updated on Dec 26, 2023



上傳欲分析之航班總表



```
from google.colab import files
uploaded = files.upload()
print('檔案上傳成功！')
```

...

Browse...

0 files selected.

Cancel upload

## Step 2: 點這裡上傳 xls 或 csv

## [ ] 4 18 cells hidden

```
✓ [170] # 計算時段內獨立航班及航點數量
      df_base = data_overview(df)
```

```
[171] # 計算全時段航班準時率
      otp_overall(df_base)
```

```
[172] # 計算每時航班準時率
      otp_by_hour(df_base)
```

```
✓ [173] # 計算每日航班準時率
      otp_by_day(df_base)
```

```
[174] # 計算每週航班準時率
      otp_by_week(df_base)
```

```
[175] # 計算每月航班準時率
      otp_by_month(df_base)
```

### ✧ 航班準時率分析程序

上傳欲分析之航班總表

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5m

```
from google.colab import files
uploaded = files.upload()
print('檔案上傳成功！')
```

Browse... 2023NOV.xls

```
2023NOV.xls(application/vnd.ms-excel) - 2518016 bytes, last modified: n/a - 100% done
Saving 2023NOV.xls to 2023NOV.xls
檔案上傳成功！
```

## › 程式初始化及功能定義

▶ 18 cells hidden

### ✧ 獨立航班及航點數量

✓

```
[170] # 計算時段內獨立航班及航點數量
df_base = data_overview(df)
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### ✧ 各時段航班準時率計算

☒

```
[171] # 計算全時段航班準時率
      otp_overall(df_base)
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✓

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[172] # 計算每時航班準時率
      otp_by_hour(df_base)
```

☒

```
[173] # 計算每日航班準時率
      otp_by_day(df_base)
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```
[174] # 計算每週航班準時率
      otp_by_week(df_base)
```



```
[175] # 計算每月航班準時率
      otp_by_month(df_base)
```

上傳欲分析之航班總表

```
[177] from google.colab import files
      uploaded = files.upload()
      print('檔案上傳成功!')
```

Browse... 2023NOV.xls

2023NOV.xls(application/vnd.ms-excel) - 2518016 bytes, last modified: n/a - 100% done  
Saving 2023NOV.xls to 2023NOV.xls  
檔案上傳成功！

## › 程式初始化及功能定義

▶ 18 cells hidden

### ✧ 獨立航班及航點數量

```
# 計算時段內獨立航班及航點數量
df_base = data_overview(df)
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[174] # 計算每週航班準時率
      otp_by_week(df_base)
```

```
[175] # 計算每月航班準時率
      otp_by_month(df_base)
```

Saving 2023NOV.XIS to 2023NOV.XIS  
檔案上傳成功！

## › 程式初始化及功能定義

[ ] 4 18 cells hidden

### ✎ 獨立航班及航點數量

```
# 計算時段內獨立航班及航點數量
df_base = data_overview(df)
```

資料時段: 2023-11-01 to 2023-11-30

=== 所有場站資料 ===

執飛航點數量：21

執飛航線數量： 60

執飛航班數量：1340

載運乘客總量：244597

=== TPE 機場資料 ===

TPE 離場航班數量: 670

TPE 離境旅客人次: 123058

### ✧ 各時段航班準時率計算

```
# 計算全時段航班準時率
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```

```
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otp_by_month(df_base)
```

```
[188] # 計算全時段航班準時率
      otp_overall(df_base)
```

TPE 延誤狀況統整  
(延誤 15 分鐘以上者計之)

全時段準時率表單輸出完成！

Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0 Overall	81.79		670		122		24171

```
# 計算每時航班準時率
otp_by_hour(df_base)
```

每小時準時率表單輸出完成！

	Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0	00H	NaN		0		0		0
1	01H	NaN		0		0		0
2	02H	NaN		0		0		0
3	03H	NaN		0		0		0
4	04H	NaN		0		0		0
5	05H	NaN		0		0		0
6	06H	58.33		48		20		3417
7	07H	61.18		85		33		5813
8	08H	71.43		42		12		2580
9	09H	80.00		120		24		5110
10	10H	84.42		77		12		3187
11	11H	95.31		64		3		476
12	12H	98.51		67		1		163
13	13H	NaN		0		0		0
14	14H	95.83		48		2		341
15	15H	89.83		59		6		1115
16	16H	NaN		0		0		0
17	17H	100.00		30		0		0
18	18H	NaN		0		0		0
19	19H	NaN		0		0		0
20	20H	NaN		0		0		0
21	21H	NaN		0		0		0
22	22H	NaN		0		0		0
23	23H	70.00		30		9		196

每小時準時率統計圖輸出完成！

```
[173] # 計算每日航班準時率
      otp_by_day(df_base)
```

[174] # 計算每週航班準時率

Files

drive

output\_231226

- TPE\_OTP-Day\_20231101-20231...
- TPE\_OTP-Day\_20231101-20231...
- TPE\_OTP-Hour\_20231101-2023...
- TPE\_OTP-Hour\_20231101-2023...
- TPE\_OTP-Month\_20231101-202...
- TPE\_OTP-Month\_20231101-202...
- TPE\_OTP-Overall\_20231101-20...
- TPE\_OTP-Week\_20231101-202...
- TPE\_OTP-Week\_20231101-202...

sample\_data

2023NOV.xls

剛剛輸出的資料  
在這邊，有圖跟  
表，雙點擊可打  
開來看

## 各時段航班準時率計算

```
[188] # 計算全時段航班準時率
otp_overall(df_base)
```

TPE 延誤狀況統整  
(延誤 15 分鐘以上者計之)

全時段準時率表單輸出完成！

	Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0	Overall	81.79		670		122		24171

```
[189] # 計算每時航班準時率
otp_by_hour(df_base)
```

每小時準時率表單輸出完成！

	Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0	00H	NaN		0		0		0
1	01H	NaN		0		0		0
2	02H	NaN		0		0		0
3	03H	NaN		0		0		0
4	04H	NaN		0		0		0
5	05H	NaN		0		0		0
6	06H	58.33		48		20		3417
7	07H	61.18		85		33		5813
8	08H	71.43		42		12		2580
9	09H	80.00		120		24		5110
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11	11H	95.31		64		3		476
12	12H	98.51		67		1		163
13	13H	NaN		0		0		0
14	14H	95.83		48		2		341
15	15H	89.83		59		6		1115
16	16H	NaN		0		0		0
17	17H	100.00		30		0		0
18	18H	NaN		0		0		0
19	19H	NaN		0		0		0
20	20H	NaN		0		0		0
21	21H	NaN		0		0		0
22	22H	NaN		0		0		0
23	23H	70.00		30		9		1969

每小時準時率統計圖輸出完成！

```
[190] # 計算每日航班準時率
otp_by_day(df_base)
```

每日準時率表單輸出完成！



Files

drive

output\_231226

TPE\_OTP-Day\_20231101-20231...

TPE\_OTP-Day\_20231101-20231...

TPE\_OTP-Hour\_20231101-2023...

TPE\_OTP-Hour\_20231101-20231...

TPE\_OTP-Month\_20231101-20231...

TPE\_OTP-Month\_20231101-20231...

TPE\_OTP-Overall\_20231101-20231...

TPE\_OTP-Week\_20231101-20231...

TPE\_OTP-Week\_20231101-20231...

sample\_data

2023NOV.xls

各時段航班準時率計算

0s

[188] # 計算全時段航班準時率  
otp\_overall(df\_base)

TPE 延誤狀況統整  
(延誤 15 分鐘以上者計之)

TPE\_OTP-Hour\_20231101-20231130.csv (396)  
Last modified Tue Dec 26 2023 12:18:24 GMT+0800 (Taipei Standard Time)

	Period	OTP	TTL FLT	DLY FLT	DLY PAX
0	Overall	81.79	670	122	24171

1s

[189] # 計算每時航班準時率  
otp\_by\_hour(df\_base)

每小時準時率表單輸出完成！

	Period	OTP	TTL FLT	DLY FLT	DLY PAX
0	00H	NaN	0	0	0
1	01H	NaN	0	0	0
2	02H	NaN	0	0	0
3	03H	NaN	0	0	0
4	04H	NaN	0	0	0
5	05H	NaN	0	0	0
6	06H	58.33	48	20	3417
7	07H	61.18	85	33	5813
8	08H	71.43	42	12	2580
9	09H	80.00	120	24	5110
10	10H	84.42	77	12	3187
11	11H	95.31	64	3	476
12	12H	98.51	67	1	163
13	13H	NaN	0	0	0
14	14H	95.83	48	2	341
15	15H	89.83	59	6	1115
16	16H	NaN	0	0	0
17	17H	100.00	30	0	0
18	18H	NaN	0	0	0
19	19H	NaN	0	0	0
20	20H	NaN	0	0	0
21	21H	NaN	0	0	0
22	22H	NaN	0	0	0
23	23H	70.00	30	9	1969

每小時準時率統計圖輸出完成！

0s

[190] # 計算每日航班準時率  
otp\_by\_day(df\_base)

TPE\_OTP-Hour\_20231101-20231130.csv

1 to 24 of 24 entries

Filter

Period	OTP	TTL FLT	DLY FLT	DLY PAX
00H		0	0	0
01H		0	0	0
02H		0	0	0
03H		0	0	0
04H		0	0	0
05H		0	0	0
06H	58.33	48	20	3417
07H	61.18	85	33	5813
08H	71.43	42	12	2580
09H	80.0	120	24	5110
10H	84.42	77	12	3187
11H	95.31	64	3	476
12H	98.51	67	1	163
13H		0	0	0
14H	95.83	48	2	341
15H	89.83	59	6	1115
16H		0	0	0
17H	100.0	30	0	0
18H		0	0	0
19H		0	0	0
20H		0	0	0
21H		0	0	0
22H		0	0	0
23H	70.0	30	9	1969

Show 50 per page

可以調整每一頁顯示筆數

+ Code + Text All changes saved

0s completed at 12:19 PM

Disk 81.45 GB available

### 各時段航班準時率計算

```
[188] # 計算全時段航班準時率
otp_overall(df_base)
```

TPE 延誤狀況統整  
(延誤 15 分鐘以上者計之)

全時段準時率表單輸出完成！

TPE\_OTP-Hour\_20231101-20231130.jpg (70.5K)  
Last modified Tue Dec 26 2023 12:18:25 GMT+0800 (Taipei Standard Time)

	FLT	DLY	PAX
Overall	81.79	670	122 24171

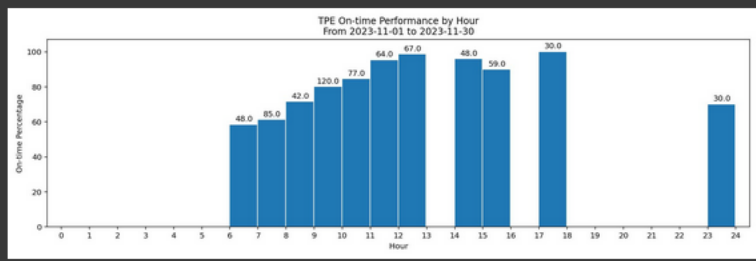
```
[189] # 計算每時航班準時率
otp_by_hour(df_base)
```

每小時準時率表單輸出完成！

Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0 00H	NaN		0		0		0
1 01H	NaN		0		0		0
2 02H	NaN		0		0		0
3 03H	NaN		0		0		0
4 04H	NaN		0		0		0
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16 16H	NaN		0		0		0
17 17H	100.00		30		0		0
18 18H	NaN		0		0		0
19 19H	NaN		0		0		0
20 20H	NaN		0		0		0
21 21H	NaN		0		0		0
22 22H	NaN		0		0		0
23 23H	70.00		30		9		1969

每小時準時率統計圖輸出完成！

```
[190] # 計算每日航班準時率
otp_by_day(df_base)
```



滑鼠點一下可放大

Files

🔍

📁

📄

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{x}

📁 ..

📁 drive

📁 output\_231226

TPE\_OTP-Day\_20231101-20231...

TPE\_OTP-Day\_20231101-20231...

TPE\_OTP-Hour\_20231101-2023...

TPE\_OTP-Hour\_20231101-2023...

TPE\_OTP-Month\_20231101-2023...

TPE\_OTP-Month\_20231101-2023...

TPE\_OTP-Overall\_20231101-20...

TPE\_OTP-Week\_20231101-202...

TPE\_OTP-Week\_20231101-202...

📁 sample\_data

📄 2023NOV.xls

按這邊有下載選項

+ Code + Text All changes saved

各時段航班準時率計算

✓ [188] # 計算全時段航班準時率  
otp\_overall(df\_base)  
0s  
TPE 延誤狀況統整  
(延誤 15 分鐘以上者計之)  
全時段準時率表單輸出完成！  
TPE\_OTP-Hour\_20231101-20231130.jpg (70.5K)  
Last modified Tue Dec 26 2023 12:18:25 GMT+0800 (Taipei Standard Time)  
0 Overall 81.79 670 122 24171

✓ [189] # 計算每時航班準時率  
otp\_by\_hour(df\_base)  
1s  
每小時準時率表單輸出完成！

	Period	OTP	TTL	FLT	DLY	FLT	DLY	PAX
0	00H	NaN		0		0		0
1	01H	NaN		0		0		0
2	02H	NaN		0		0		0
3	03H	NaN		0		0		0
4	04H	NaN		0		0		0
5	05H	NaN		0		0		0
6	06H	58.33		48		20		3417
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15	15H	89.83		59		6		1115
16	16H	NaN		0		0		0
17	17H	100.00		30		0		0
18	18H	NaN		0		0		0
19	19H	NaN		0		0		0
20	20H	NaN		0		0		0
21	21H	NaN		0		0		0
22	22H	NaN		0		0		0
23	23H	70.00		30		9		1969

  
每小時準時率統計圖輸出完成！

✓ [190] # 計算每日航班準時率  
otp\_by\_day(df\_base)  
0s

RAM Disk Colab AI

TPE\_OTP-Hour\_20231101-20231130.csv TPE\_OTP-Hour\_20231101-20231130

TPE On-time Performance by Hour  
From 2023-11-01 to 2023-11-30

Hour	On-time Percentage
6	48.0
7	61.18
8	71.43
9	80.00
10	84.42
11	95.31
12	98.51
13	64.0
14	95.83
15	89.83
16	59.0
17	100.0
18	30.0
23	30.0

✓ 0s completed at 12:19 PM