

Machine Learning of AI Chatbot

Louis

Outline

- ChatBot
- Python LINE Bot SDK
- Heroku registered
- Line Developer
- Line Bot Channel
- Line Bot Set
- Heroku CLI
- Git
- Heroku & Line

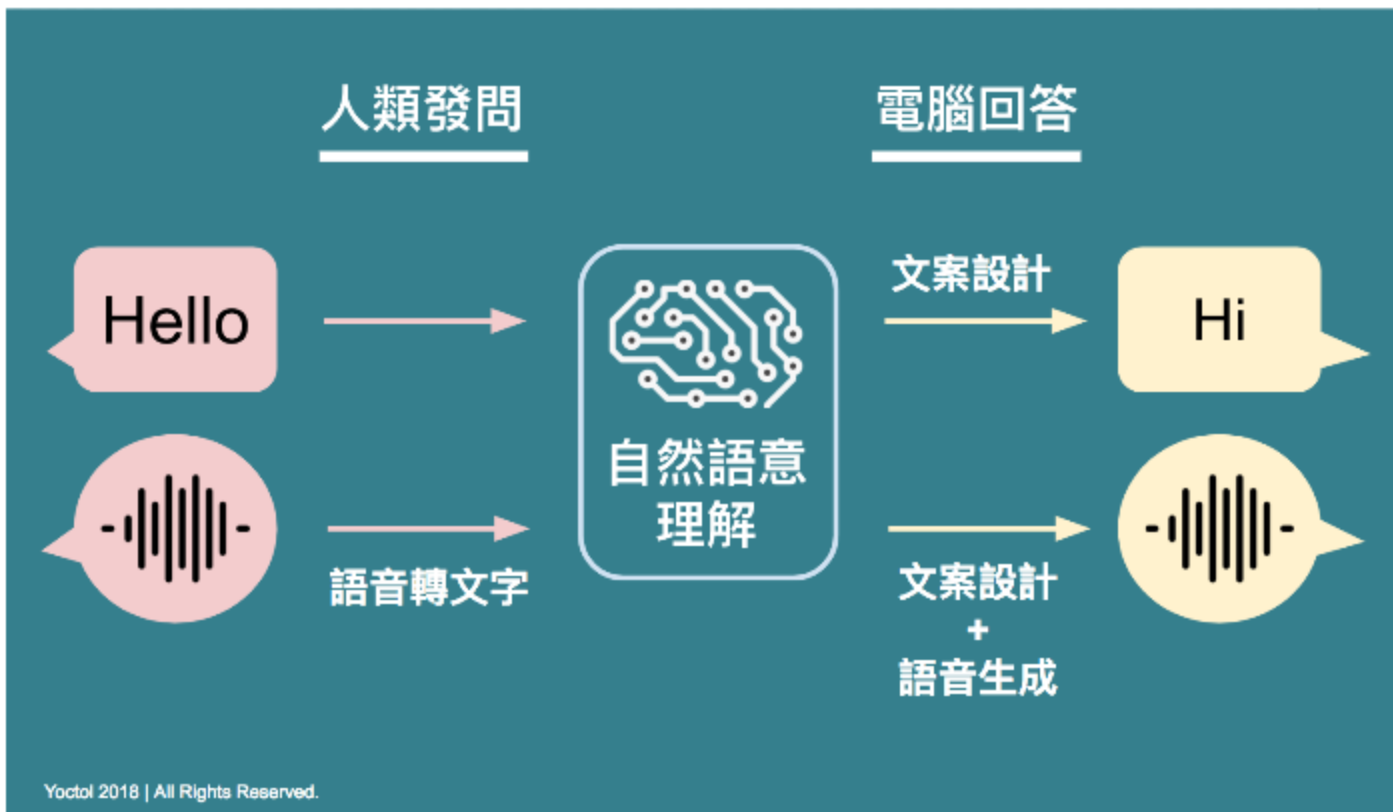
ChatBot

Louis

聊天機器人 (ChatBot)

- 對話或文字進行交談的電腦程式
 - 客戶服務
 - 資訊獲取
- IM bot (即時通訊軟體作為互動平台)
 - Facebook Messenger
 - LINE
 - WeChat
 - 聊天用的 app，就可以享受機器人的服務

ChatBot



圖片來源：YOCTOL

Chatbot vs ML

- Chatbot vs ML
 - Chatbot 一定要包含機器學習的成分?
 - Chatbot 遵從指令做事的能力

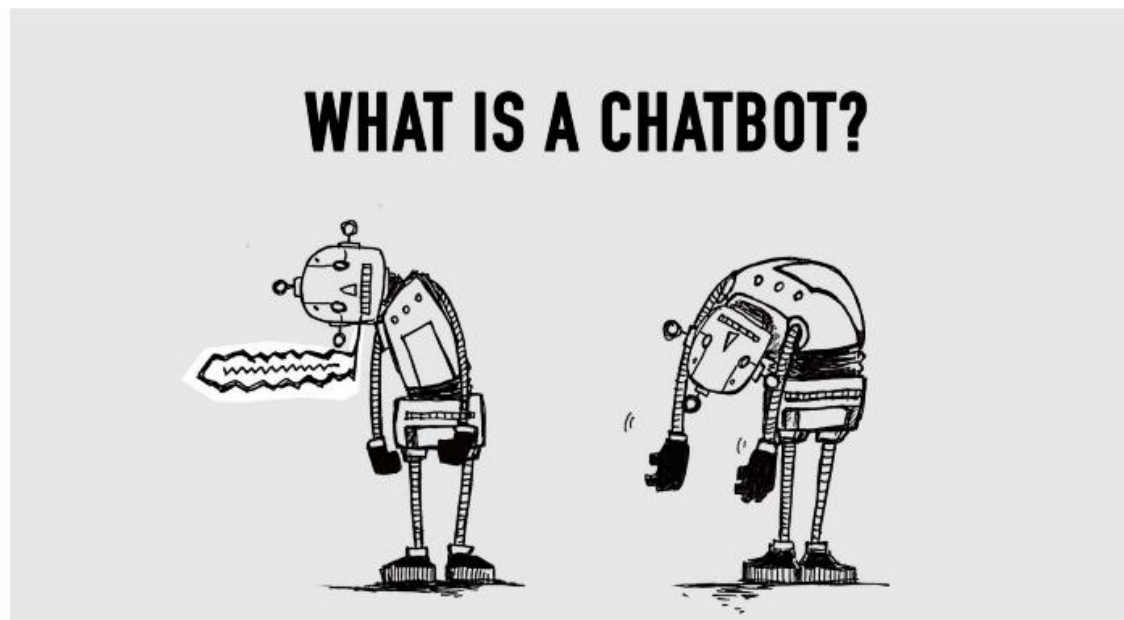


Image source: YOCTOL

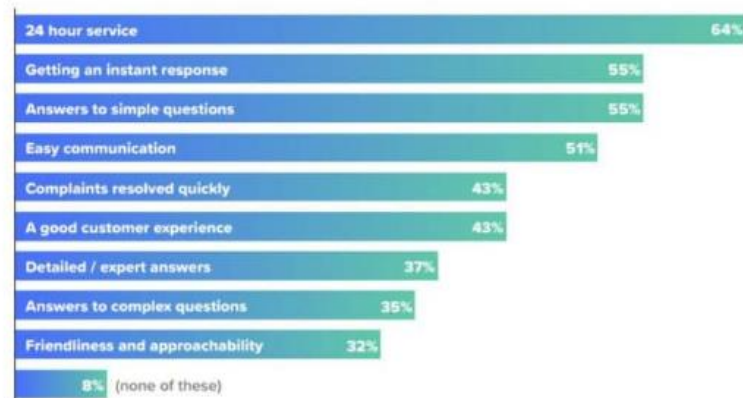
2020/7/10

Chatbot 優點

- Chatbot 優點
 - 省時省成本
 - 累積名單
 - 行銷推播（發訊息）
 - 自動行銷流程
 - 即時回覆

Potential Benefits of Chatbots

If chatbots were available (and working effectively) for the online services that you use, which of these benefits would you expect to enjoy?



Python LINE Bot SDK

Louis

Python LINE Bot SDK

- Line Developer
- Heroku

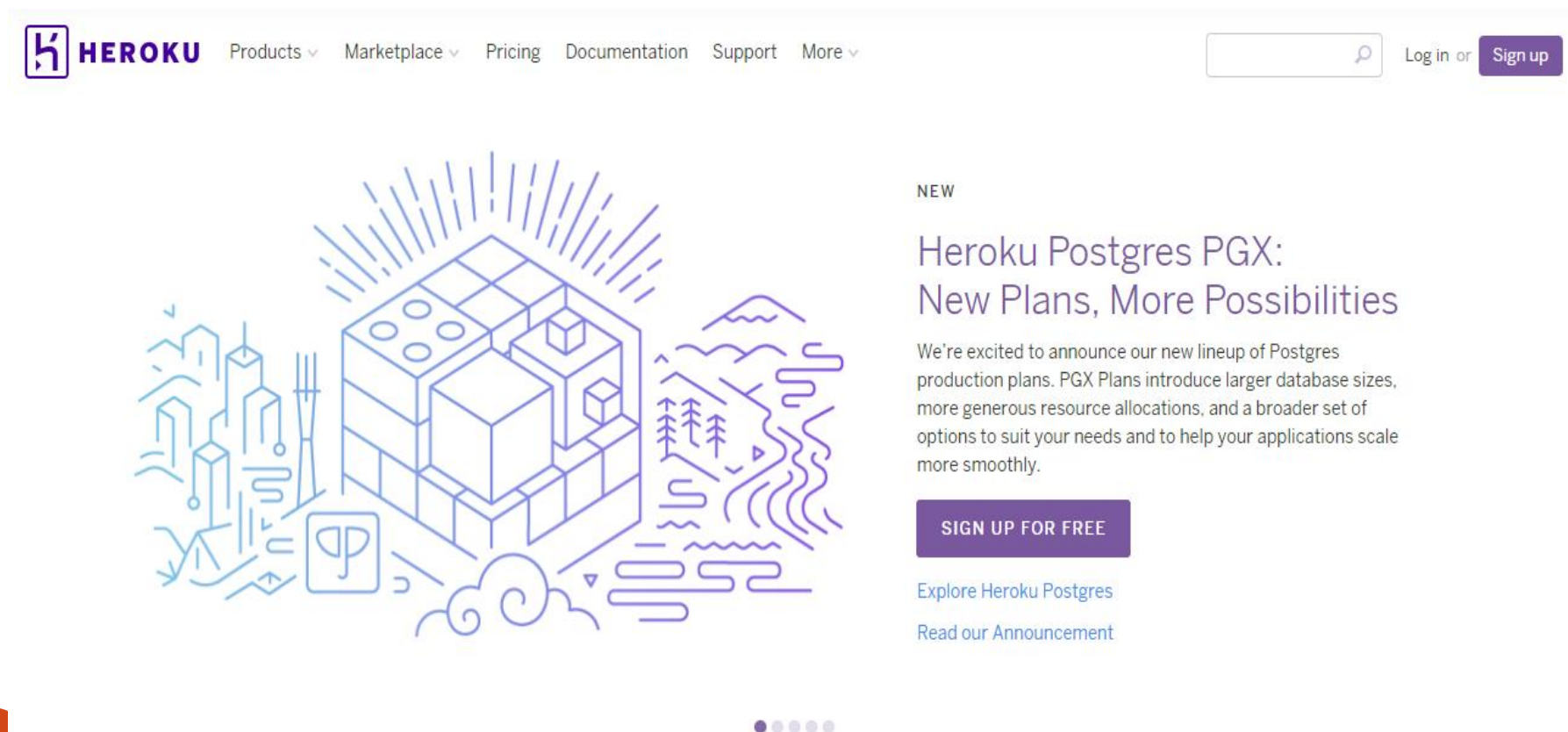


Heroku registered



Heroku registered

- Heroku 帳戶



The screenshot shows the Heroku website homepage. At the top is the Heroku logo and a navigation menu with links for Products, Marketplace, Pricing, Documentation, Support, and More. On the right, there is a search bar and buttons for Log in or Sign up. The main content area features a large, stylized illustration of a cityscape with a central building that has a sunburst effect. To the right of the illustration, the text 'NEW' is followed by the headline 'Heroku Postgres PGX: New Plans, More Possibilities'. Below this, a paragraph describes the new production plans, mentioning larger database sizes, more generous resource allocations, and a broader set of options. A prominent purple button labeled 'SIGN UP FOR FREE' is positioned below the text. At the bottom of the main content area, there are two links: 'Explore Heroku Postgres' and 'Read our Announcement'. A small progress indicator with five dots is visible at the bottom center of the page.

HEROKU Products ▾ Marketplace ▾ Pricing Documentation Support More ▾

Log in or Sign up

NEW

Heroku Postgres PGX: New Plans, More Possibilities

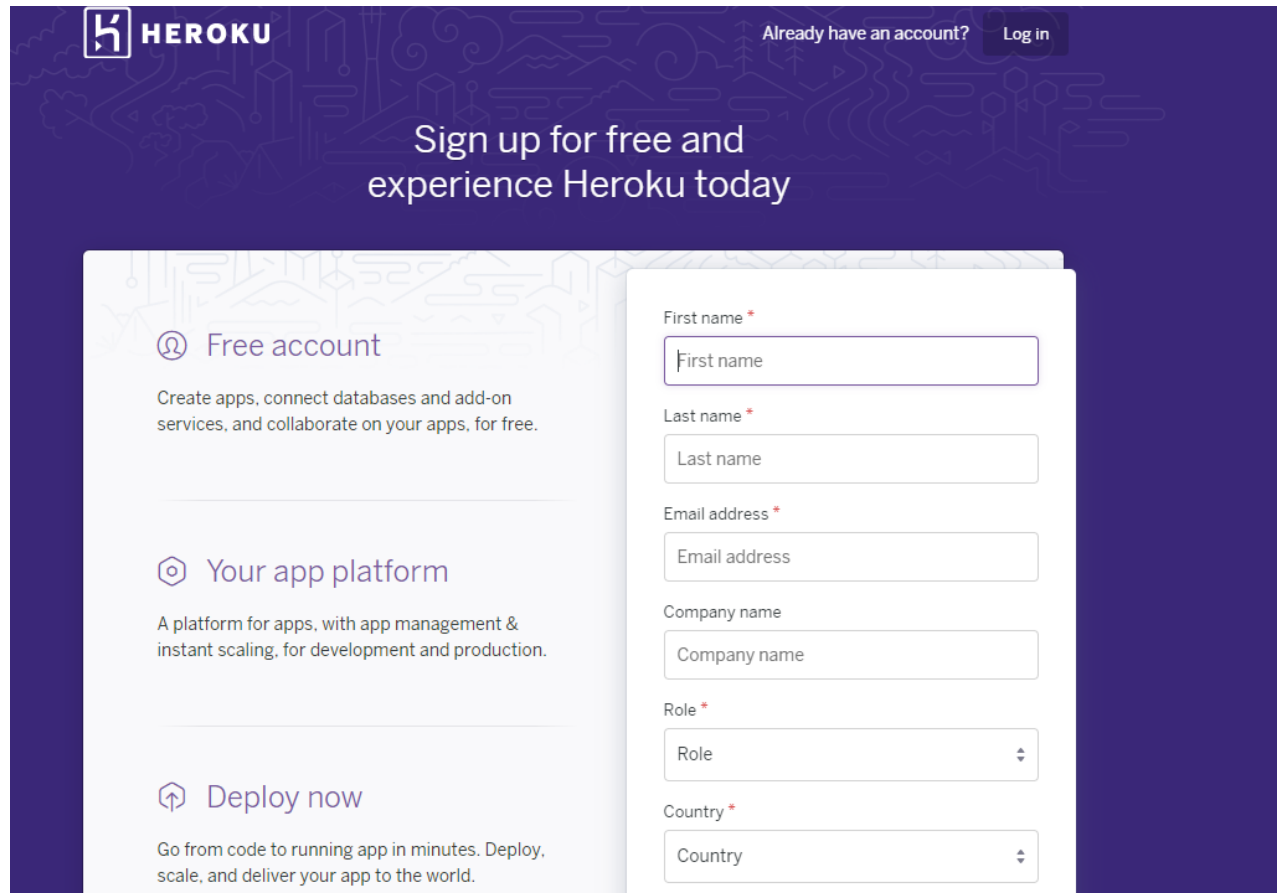
We're excited to announce our new lineup of Postgres production plans. PGX Plans introduce larger database sizes, more generous resource allocations, and a broader set of options to suit your needs and to help your applications scale more smoothly.

SIGN UP FOR FREE

[Explore Heroku Postgres](#)
[Read our Announcement](#)

Heroku registered

- Sign up




The screenshot shows the Heroku sign-up page. At the top, the Heroku logo is on the left, and the text "Already have an account? Log in" is on the right. The main heading is "Sign up for free and experience Heroku today". Below this, there are three sections on the left: "Free account" (with a person icon), "Your app platform" (with a gear icon), and "Deploy now" (with a cloud icon). On the right, there is a sign-up form with the following fields: "First name" (required), "Last name" (required), "Email address" (required), "Company name", "Role" (required, dropdown), and "Country" (required, dropdown). Each field has a placeholder text and a red asterisk for required fields.


HEROKU

Already have an account? Log in


Sign up for free and experience Heroku today

 **Free account**

Create apps, connect databases and add-on services, and collaborate on your apps, for free.

 **Your app platform**

A platform for apps, with app management & instant scaling, for development and production.

 **Deploy now**

Go from code to running app in minutes. Deploy, scale, and deliver your app to the world.

First name *

Last name *

Email address *

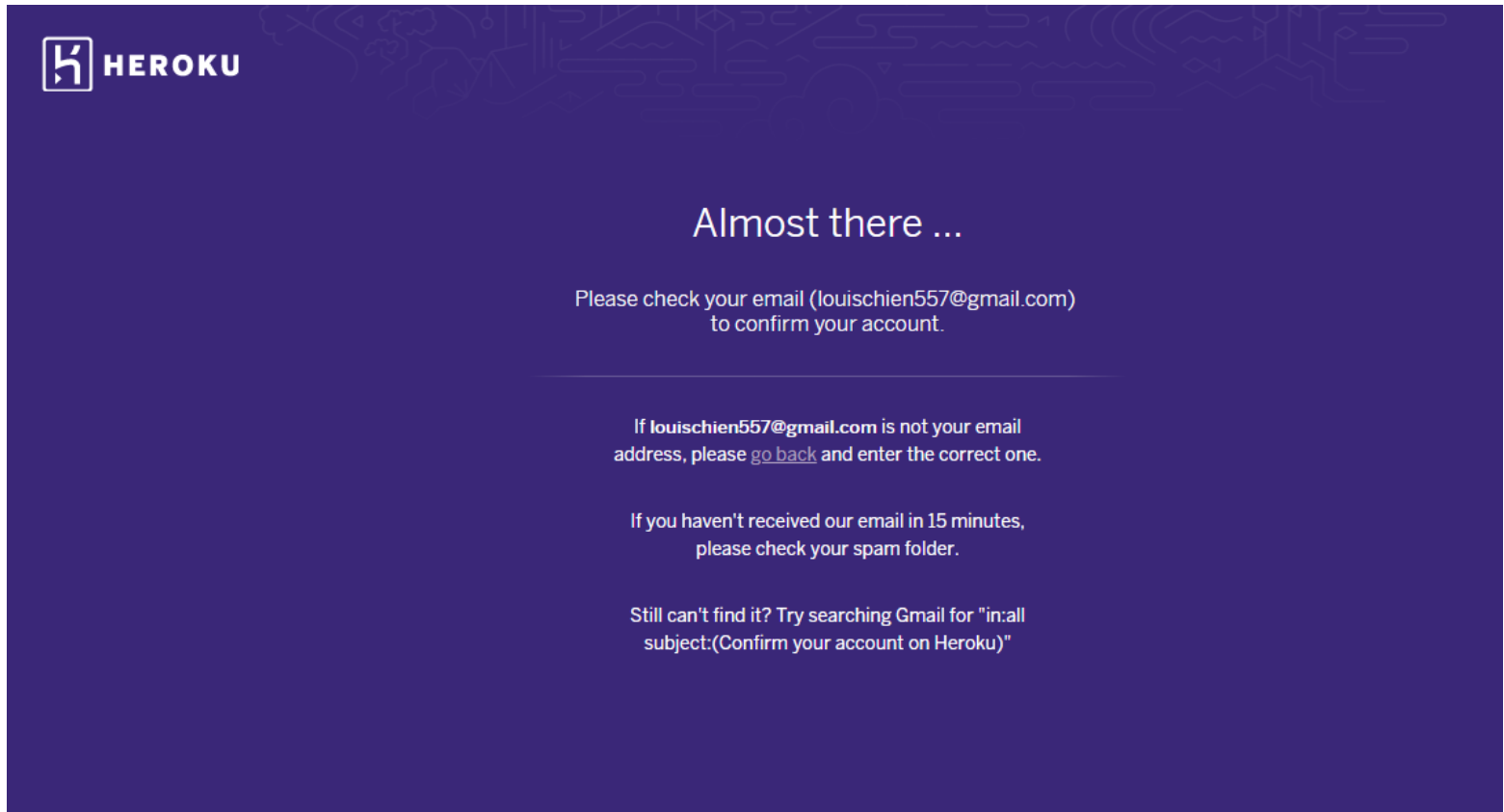
Company name

Role *

Country *

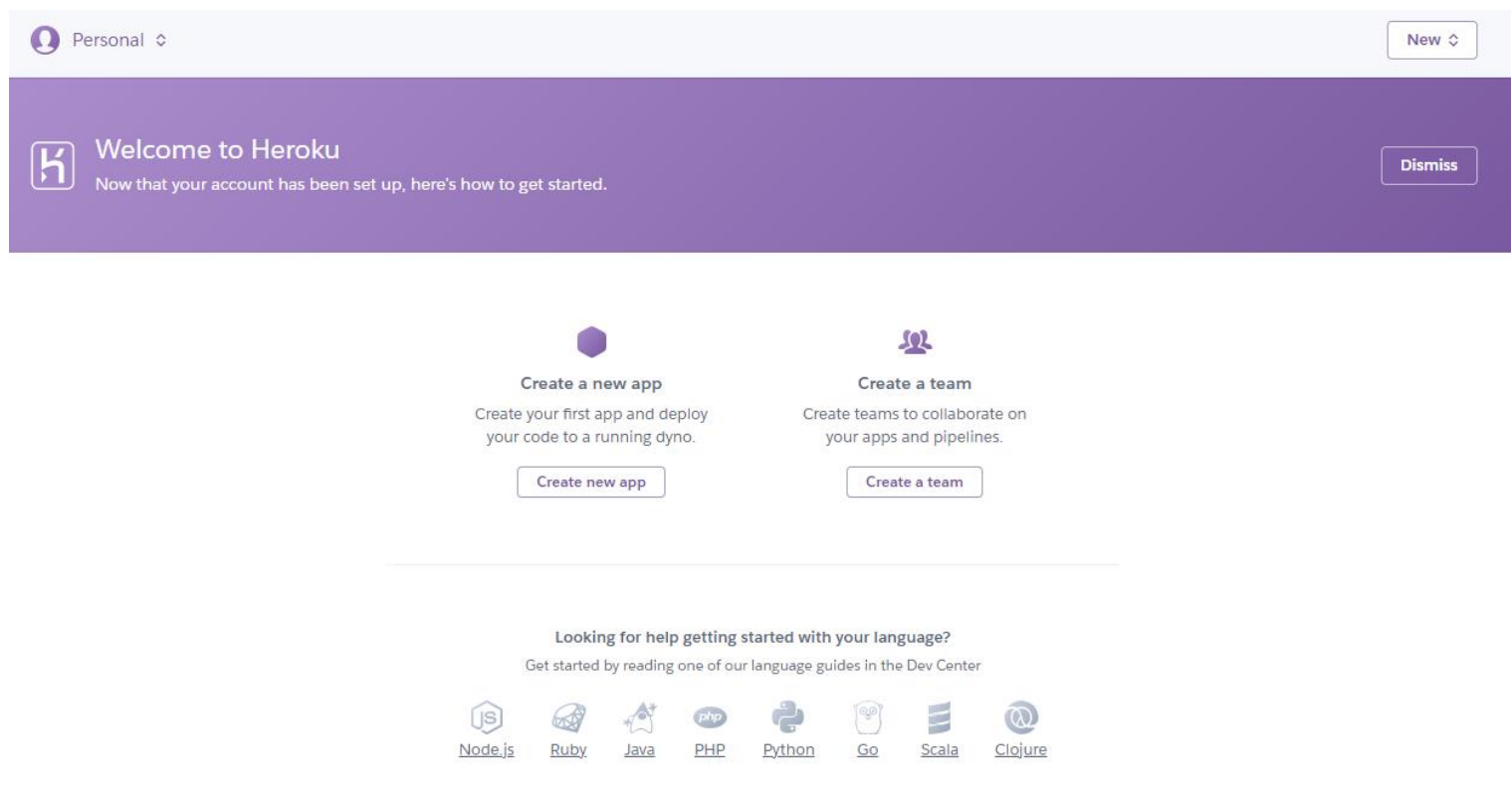
Heroku registered

- Confirm @s2xxxxxxxxx@



Heroku registered

- Login



Heroku registered

- New -> Create New App



Create a new app

Create your first app and deploy
your code to a running dyno.

Create new app

Heroku registered

- App name

Create New App

App name

cadtc-louis



cadtc-louis is available

Choose a region



United States



Add to pipeline...

Create app

Heroku registered

- Create OK

The screenshot shows the Heroku dashboard for a user named 'cadtc-louis'. The top navigation bar includes the Heroku logo, a search bar, and user profile information. The main content area is divided into sections for pipeline management, deployment methods, and deployment instructions.

Add this app to a pipeline
Create a new pipeline or choose an existing one and add this app to a stage in it.

Add this app to a stage in a pipeline to enable additional features
Pipelines let you connect multiple apps together and **promote code** between them. [Learn more.](#)
Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. [Learn more.](#)

Deployment method
Heroku Git (Use Heroku CLI), GitHub (Connect to GitHub), Container Registry (Use Heroku CLI)

Deploy using Heroku Git
Use git in the command line or a GUI tool to deploy this app.

Install the Heroku CLI
Download and install the [Heroku CLI](#).
If you haven't already, log in to your Heroku account and follow the prompts to create a new SSH public key.

```
$ heroku login
```

Create a new Git repository
Initialize a git repository in a new or existing directory

```
$ cd my-project/  
$ git init  
$ heroku git:remote -a cadtc-louis
```

Line Developer

Louis

Line Developer (API)

- Line Messaging API允許在 bot 應用程序的服務器和 LINE 平台之間傳遞數據。
- 當用戶向您的機器人發送消息時，會觸發webhook 並且LINE平台會向您的 webhook URL發送請求。然後，您的服務器向LINE平台發送請求以響應用戶。請求以JSON格式通過HTTPS發送

Line Developer (API)

- 餐廳訂位服務的 @eztable
- 計程車叫車服務的 @taxigo
- 英文學習的 @voicetube
- 推薦鄉民熱門文章的 @poller.ai

LINE developer - Note

- 第一：正確設定HTTPS
基於資料通訊安全的因素，在LINE平台上開發應用服務的所有資料傳送都必須透過加密通道。因此，當開發者架設LINE Messaging API的Webhook伺服器時，一定要使用HTTPS通訊協定。
- 如果HTTPS伺服器沒有正確設定成功，Webhook程式將無法收到LINE平台的任何事件訊息，並且管理者們會收到來自LINE平台的警示電子郵件，內容的錯誤原因會顯「UNCLASSIFIED」

LINE developer - Note

- 第二：驗證訊息來源
當開發者的Webhook伺服器收到以POST方式所傳送的LINE事件訊息時，必須要立即驗證該事件訊息是否真的來自LINE平台，以避免被偽造的訊息所欺騙造成資訊安全危機。
- 標準的驗證方式是檢查所收到HTTP請求標頭（HTTP request header）中的數位簽章。如果該HTTP POST訊息是來自LINE平台，在HTTP請求標頭中一定會包括X-Line-Signature項目，該項目的內容值是即為數位簽章。例如：

LINE developer - Note

```
POST /callback HTTP/1.1
X-Line-Signature: j9plsXsb0yCyIEE8cEsmHbp9eHc85P2DQBVH1RKiQLk=
Content-Type: application/json;charset=UTF-8
Content-Length: 223
Host: callback.sample.com
Accept: */*
User-Agent: LineBotWebhook/1.0

{"events":[{"type":"message","replyToken":"1234567890abcdef1234567890abcdef","source":
{"userId":"U1234567890abcdef1234567890abcdef","type":"user"},"timestamp":1500052665000,"message":
{"type":"audio","id":"1234567890123"}}]}
```

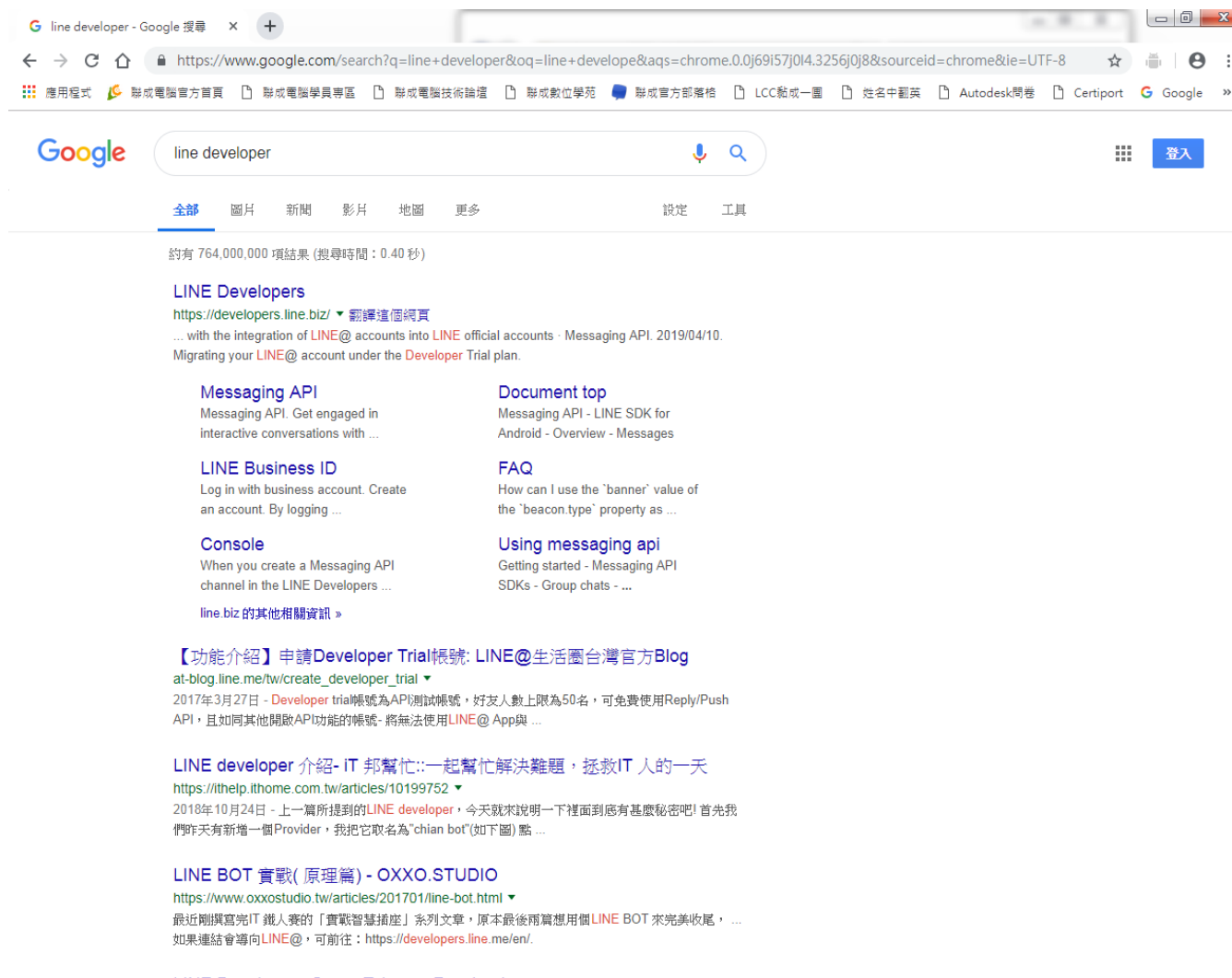
LINE developer - Note

- 第三件事：LINE平台所傳送的事件是一個陣列。這是初學LINE聊天機器人的開發者易犯的一個錯誤。可能是因為全新的Messaging API帳號沒有大量的事件訊息傳入，每次所收到事件幾乎都只有一筆資料，所以開發者會誤以為每個事件訊息只需要處理一筆資料。事實上，LINE平台傳送給Webhook伺服器的HTTP請求本體是包括一個或多個Webhook事件物件的JSON格式物件，例如：

LINE developer - Note

```
"events": [  
  {  
    "replyToken": "nHuyWiB7yP5Zw52FIkcQobQuGDXCTA",  
    "type": "message",  
    "timestamp": 1462629479859,  
    "source": {  
      "type": "user",  
      "userId": "U206d25c2ea6bd87c17655609a1c37cb8"  
    },  
    "message": {  
      "id": "325708",  
      "type": "text",  
      "text": "Hello, world"  
    }  
  },  
  {  
    "replyToken": "nHuyWiB7yP5Zw52FIkcQobQuGDXCTA",  
    "type": "follow",  
    "timestamp": 1462629479859,  
    "source": {  
      "type": "user",  
      "userId": "U206d25c2ea6bd87c17655609a1c37cb8"  
    }  
  }  
]
```

Line Developer registered



line developer - Google 搜尋

https://www.google.com/search?q=line+developer&oq=line+develope&aqs=chrome..69l57j0l4.3256j0j8&sourceid=chrome&ie=UTF-8

Google

line developer

全部 圖片 新聞 影片 地圖 更多

設定 工具

約有 764,000,000 項結果 (搜尋時間: 0.40 秒)

LINE Developers

<https://developers.line.biz/> 翻譯這個網頁

... with the integration of LINE@ accounts into LINE official accounts · Messaging API. 2019/04/10.
Migrating your LINE@ account under the Developer Trial plan.

Messaging API

Messaging API. Get engaged in interactive conversations with ...

Document top

Messaging API - LINE SDK for Android - Overview - Messages

LINE Business ID

Log in with business account. Create an account. By logging ...

FAQ

How can I use the 'banner' value of the 'beacon.type' property as ...

Console

When you create a Messaging API channel in the LINE Developers ...

Using messaging api

Getting started - Messaging API SDKs - Group chats - ...

[line.biz 的其他相關資訊 >](#)

【功能介紹】申請Developer Trial帳號: LINE@生活圈台灣官方Blog

[at-blog.line.me/tw/create_developer_trial](#)

2017年3月27日 - Developer trial帳號為API測試帳號, 好友人數上限為50名, 可免費使用Reply/Push API, 且如同其他開啟API功能的帳號- 將無法使用LINE@ App與 ...

LINE developer 介紹- IT 邦幫忙::一起幫忙解決難題, 拯救IT 人的一天

<https://ithelp.ithome.com.tw/articles/10199752>

2018年10月24日 - 上一篇所提到的LINE developer, 今天就來說明一下裡面到底有甚麼秘密吧! 首先我們昨天有新增一個Provider, 我把它取名為"chian bot"(如下圖) 點 ...

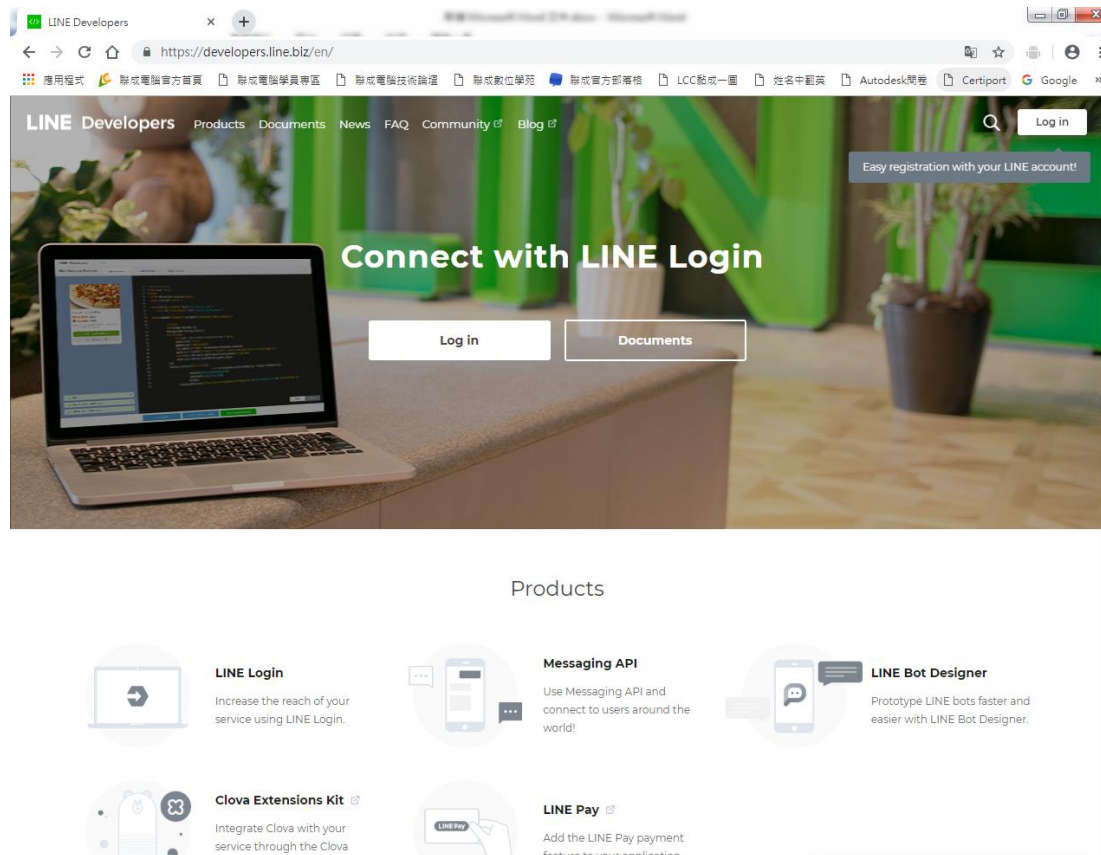
LINE BOT 實戰(原理篇) - OXXO.STUDIO

<https://www.oxoxstudio.tw/articles/201701/line-bot.html>

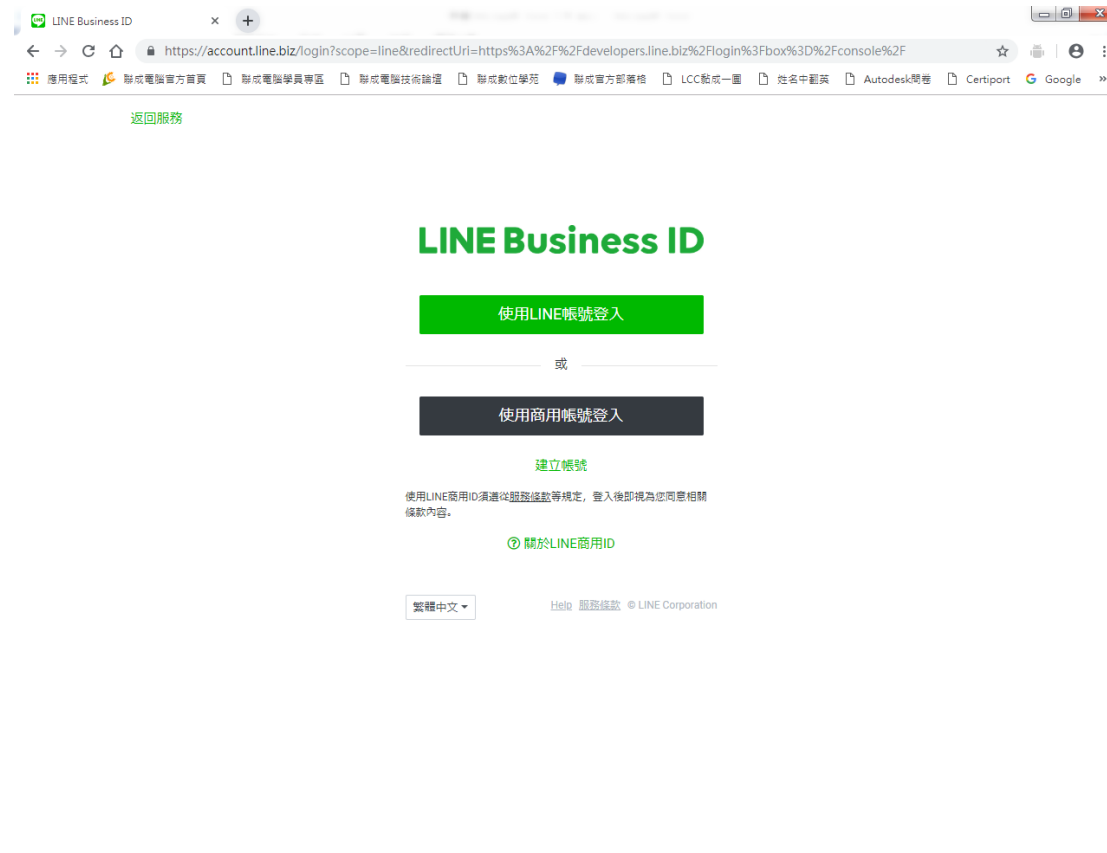
最近剛撰寫完IT 鐵人賽的「實戰智慧捕座」系列文章, 原本最後兩篇想用個LINE BOT 來完美收尾, ... 如果連結會導向LINE@, 可前往: <https://developers.line.me/en/>.

Line Developer registered

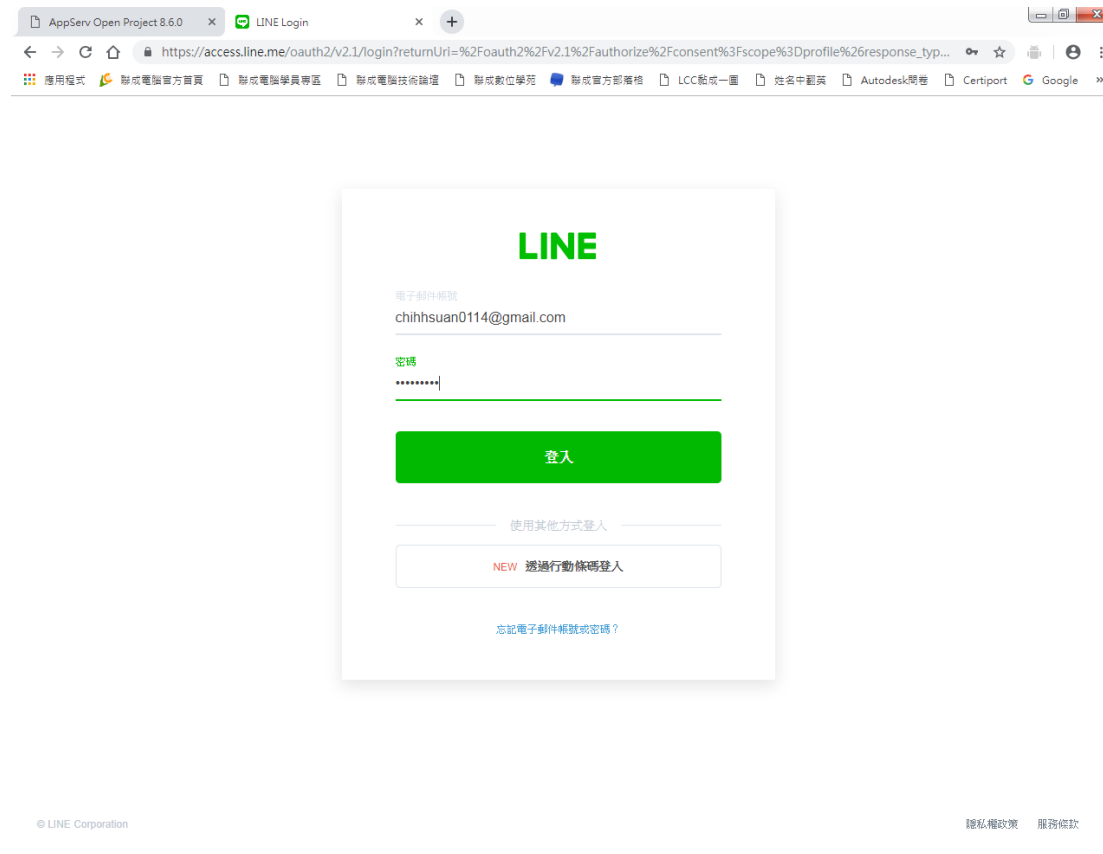
- Line developers



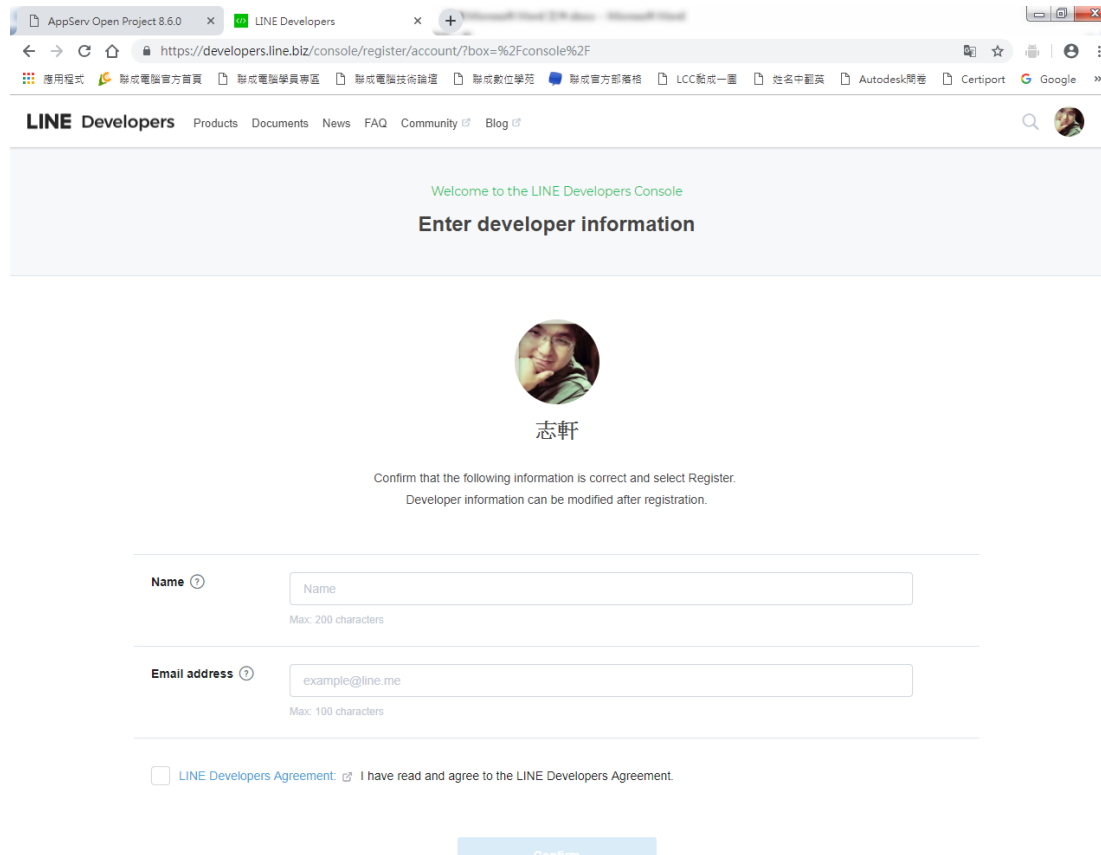
Line Developer registered



Line Developer registered



Line Developer registered



The screenshot shows a web browser window with the URL `https://developers.line.biz/console/register/account?box=%2Fconsole%2F`. The page title is "LINE Developers". The main heading is "Enter developer information". Below this, there is a profile picture of a person and the name "志軒". A confirmation message states: "Confirm that the following information is correct and select Register. Developer information can be modified after registration." The form contains two input fields: "Name" with the value "Name" and "Email address" with the value "example@line.me". At the bottom, there is a checkbox for "LINE Developers Agreement" and a "Register" button.

AppServ Open Project 8.6.0 x LINE Developers x + Microsoft Word 2016 - Microsoft Word


← → ↻ 🏠 🔒 https://developers.line.biz/console/register/account?box=%2Fconsole%2F 📄 ☆ 📱 ⓘ ⋮

📱 應用程式 📄 聯成電腦官方網頁 📄 聯成電腦學員專區 📄 聯成電腦技術論壇 📄 聯成數位學院 📄 聯成東方部落格 📄 LCC 聯成一體 📄 姓名中翻英 📄 Autodesk 閱卷 📄 Certipart 📄 Google »

LINE Developers Products Documents News FAQ Community ⓘ Blog ⓘ 🔍 👤

Welcome to the LINE Developers Console

Enter developer information


志軒

Confirm that the following information is correct and select Register.
Developer information can be modified after registration.

Name ⓘ
Max: 200 characters

Email address ⓘ
Max: 100 characters

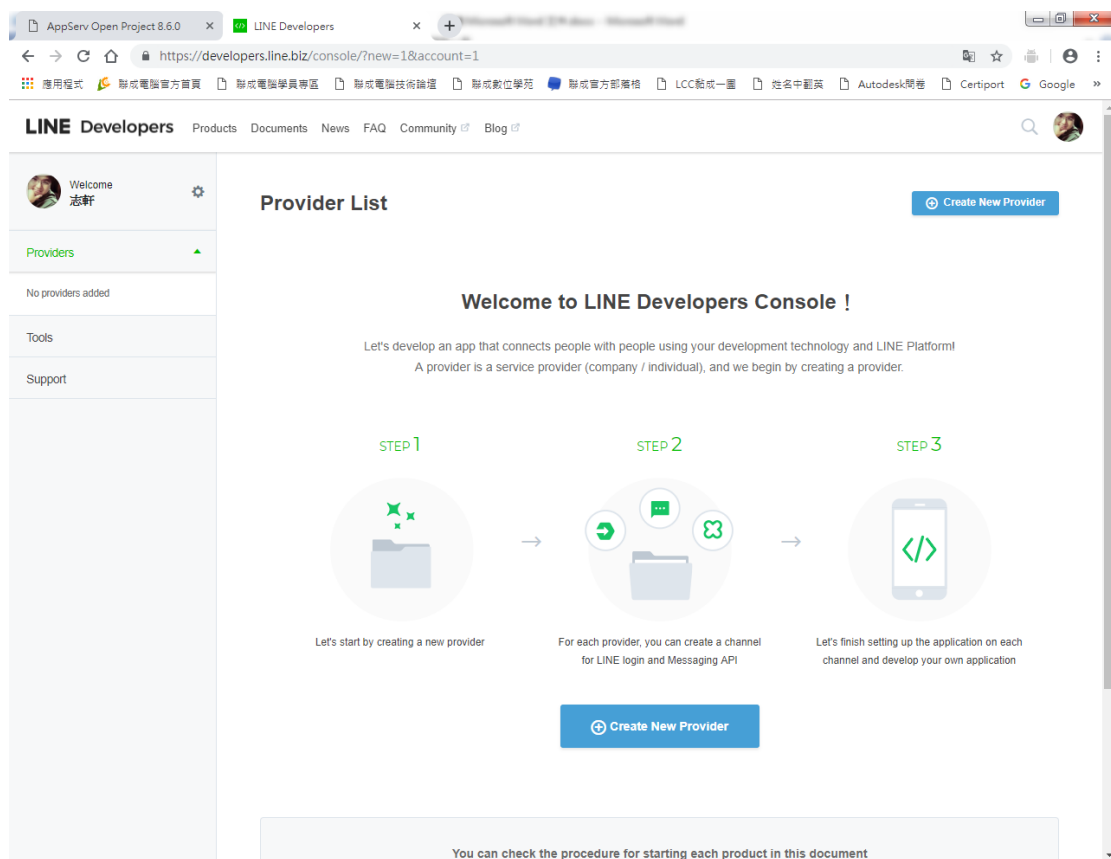
☐ [LINE Developers Agreement](#) ⓘ I have read and agree to the LINE Developers Agreement.

Line Bot Channel

Louis

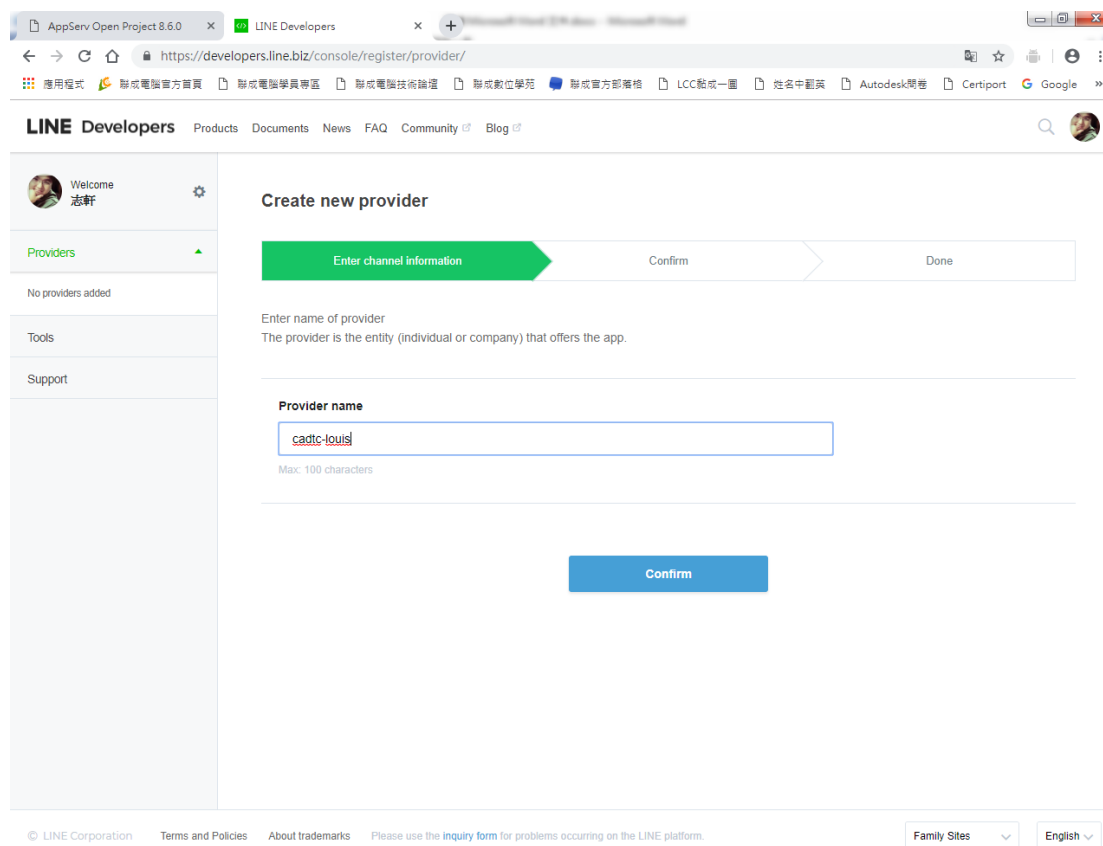
Line Bot Channel

- Line Bot Channel



Line Bot Channel

- 創建提供者



The screenshot shows the LINE Developers console at the URL <https://developers.line.biz/console/register/provider/>. The page is titled "Create new provider" and features a progress bar with three steps: "Enter channel information" (active), "Confirm", and "Done". Below the progress bar, there is a text input field for the "Provider name" with the value "cadtc-louis" entered. A note below the field states "Max: 100 characters". A blue "Confirm" button is located at the bottom of the form. The left sidebar contains a "Providers" section with a green arrow and the text "No providers added", along with "Tools" and "Support" links. The footer includes copyright information for LINE Corporation, links to "Terms and Policies" and "About trademarks", a note about the inquiry form, and language selection options for "Family Sites" and "English".

LINE Developers

Create new provider

Enter channel information Confirm Done

Enter name of provider
The provider is the entity (individual or company) that offers the app.

Provider name

cadtc-louis

Max: 100 characters

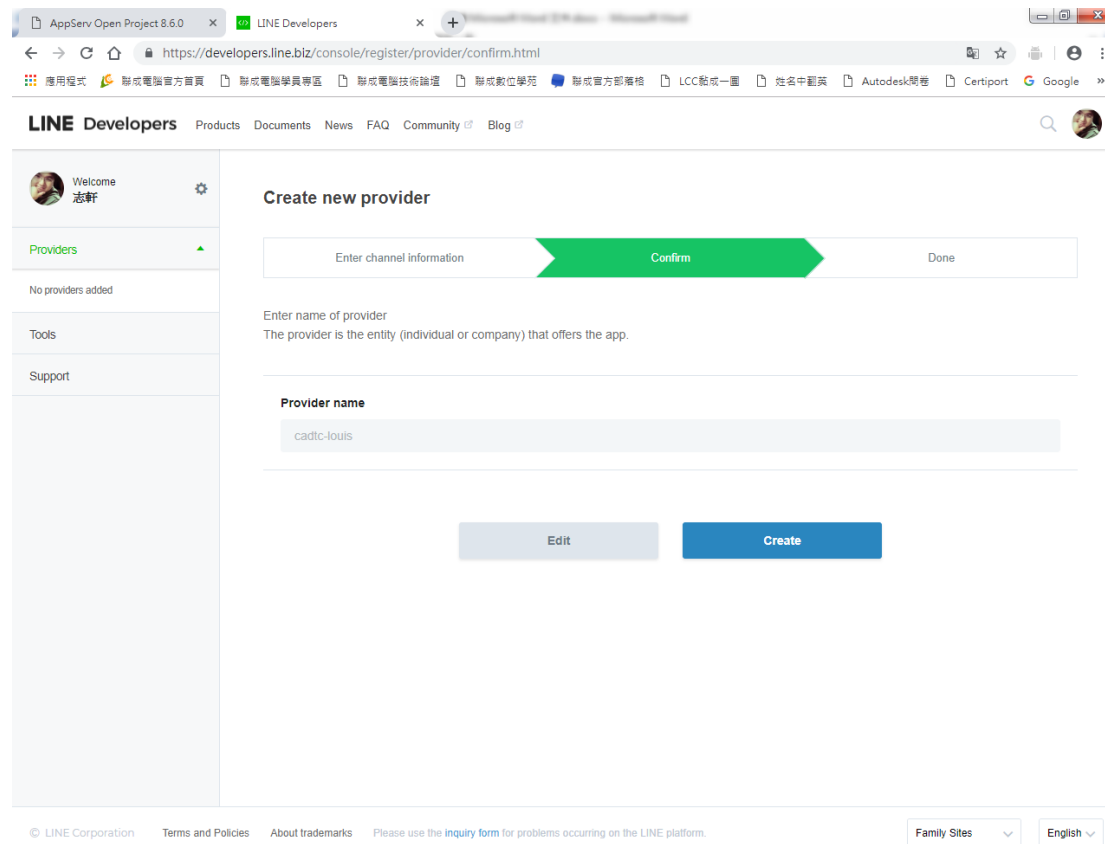
Confirm

© LINE Corporation Terms and Policies About trademarks Please use the [inquiry form](#) for problems occurring on the LINE platform.

Family Sites English

Line Bot Channel

- 填入提供者名稱



The screenshot shows the LINE Developers console interface. The browser address bar displays `https://developers.line.biz/console/register/provider/confirm.html`. The page title is "LINE Developers". The left sidebar contains a user profile "Welcome 志軒" and a menu with "Providers", "Tools", and "Support". The main content area is titled "Create new provider" and features a progress bar with three steps: "Enter channel information", "Confirm" (highlighted in green), and "Done". Below the progress bar, the text reads "Enter name of provider" and "The provider is the entity (individual or company) that offers the app." A form field labeled "Provider name" contains the text "cadtc-louis". At the bottom of the form are two buttons: "Edit" and "Create". The footer includes copyright information for LINE Corporation, links to Terms and Policies and About trademarks, a note about the inquiry form, and dropdown menus for "Family Sites" and "English".

LINE Developers

Welcome 志軒

Providers

No providers added

Tools

Support

Create new provider

Enter channel information → **Confirm** → Done

Enter name of provider
The provider is the entity (individual or company) that offers the app.

Provider name

cadtc-louis

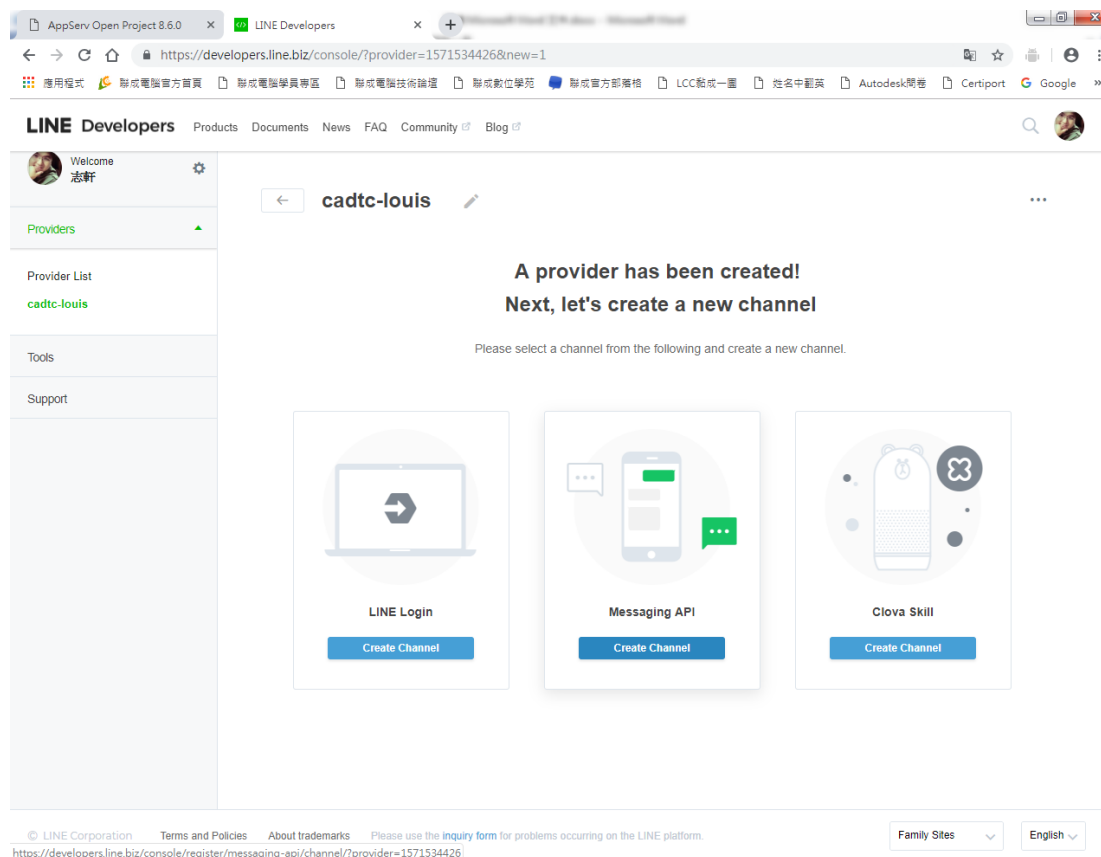
Edit Create

© LINE Corporation Terms and Policies About trademarks Please use the [inquiry form](#) for problems occurring on the LINE platform.

Family Sites English

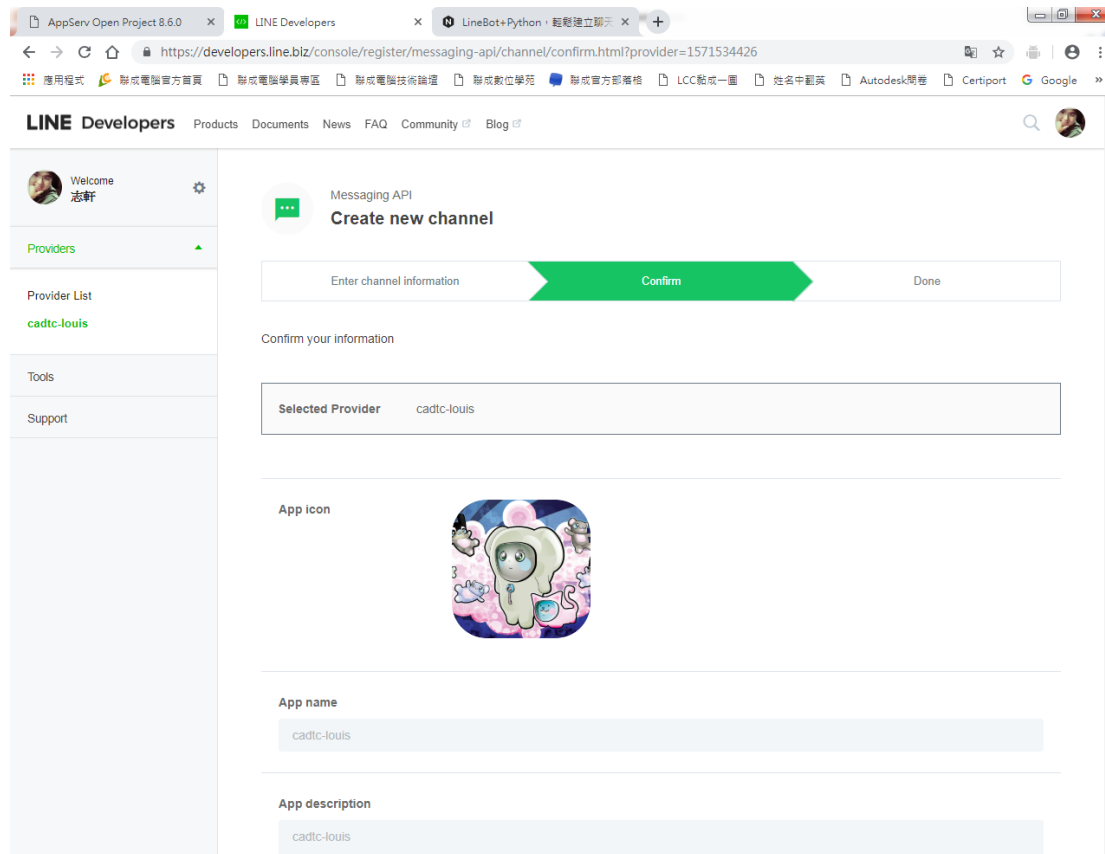
Line Bot Channel

- 點擊 Create Channel



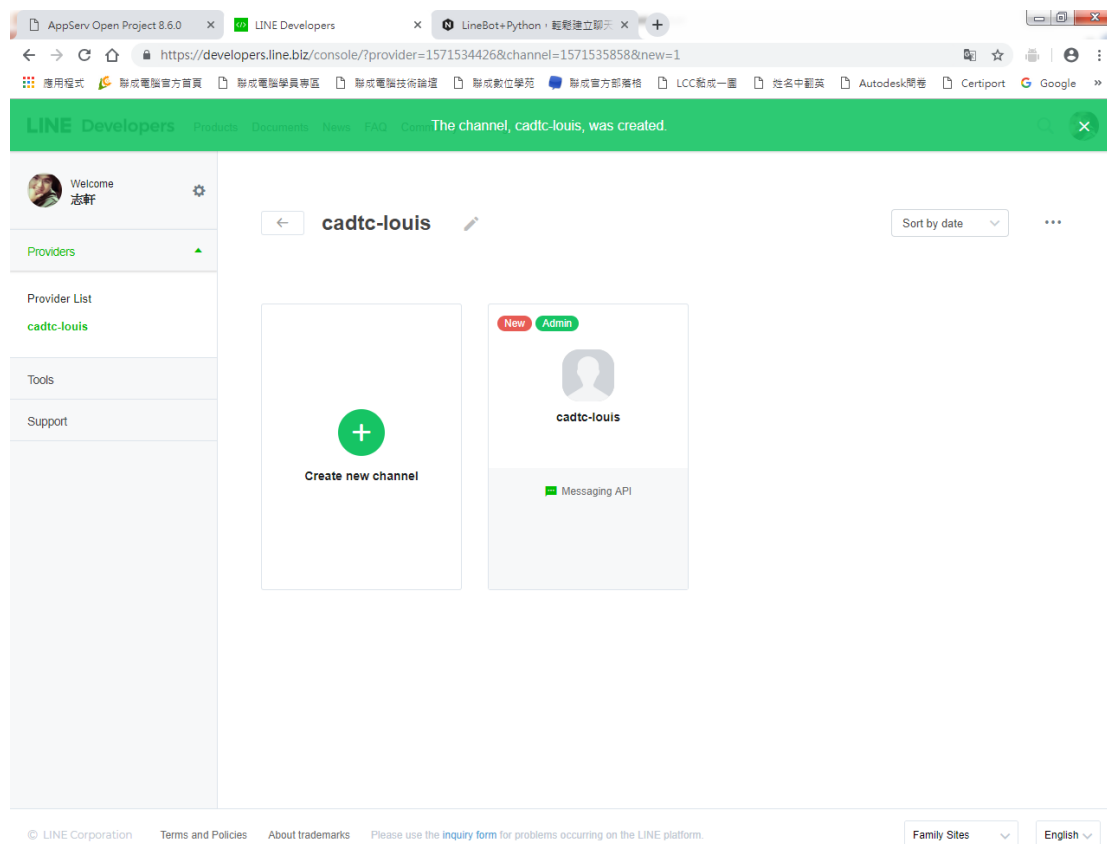
Line Bot Channel

- Bot 資訊



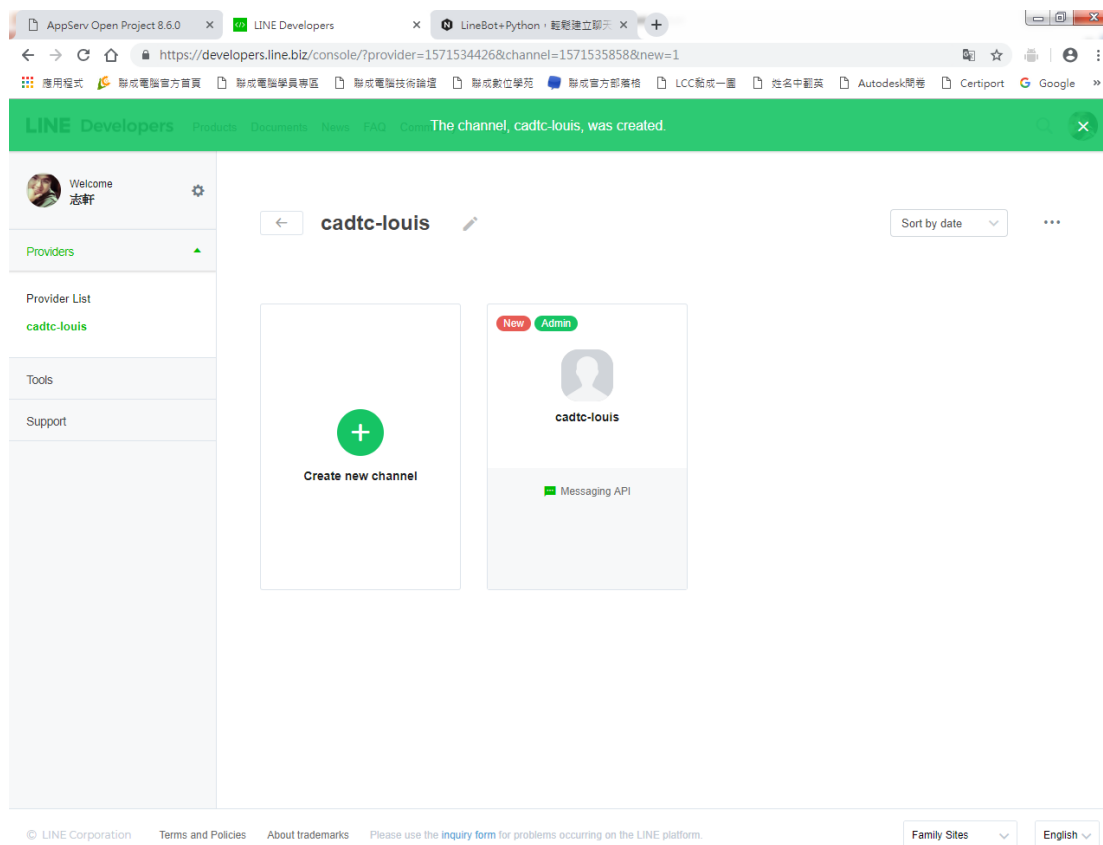
Line Bot Channel

- 同意 Line 條款，
- 並按 Create



Line Bot Channel

- 選擇剛剛創建的 Bot

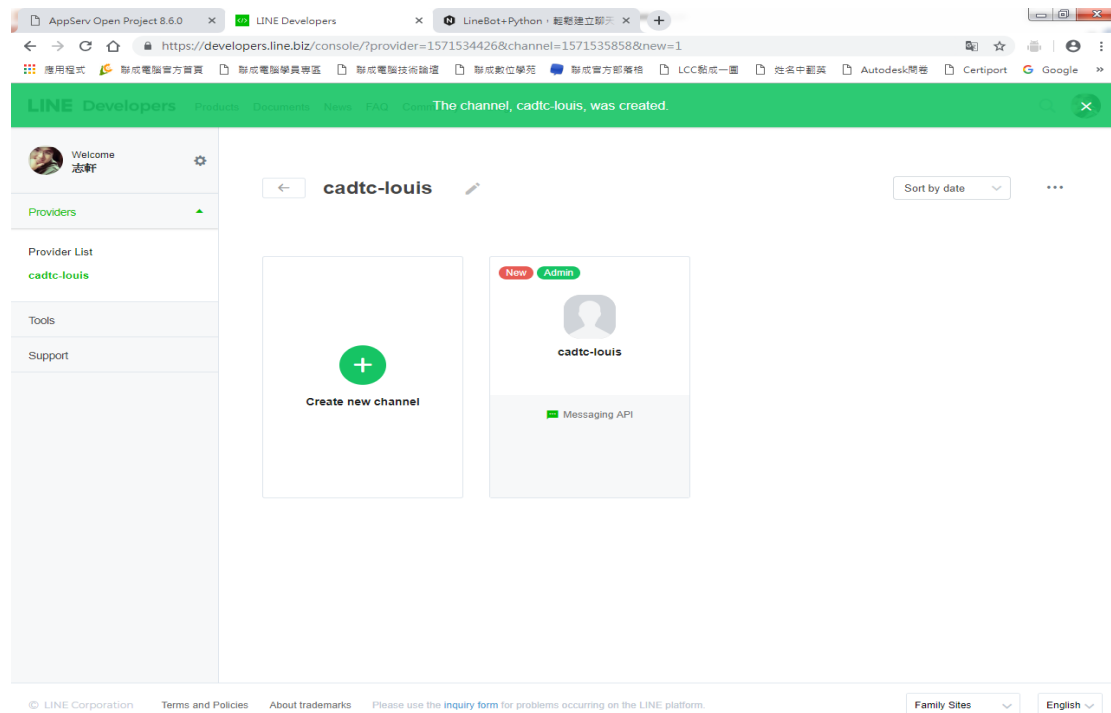


Line Bot Set

Louis

Line Bot Set

- 設定範例機器人



Line Bot Set

The screenshot shows a web browser window with the URL `https://developers.line.biz/console/register/messaging-api/channel/confirm.html?provider=1571534426`. The page is titled "LINE Developers" and contains a registration form for a messaging API channel. The form includes fields for "Category" (set to "購物、零售"), "Subcategory" (set to "3C、家電 (買賣、維修、包換)"), "Email address" (set to "louischien557@gmail.com"), "Privacy Policy URL", and "Terms Of Use URL". At the bottom, there are two checkboxes for agreeing to the "LINE Official Account Terms of Use" and "LINE Official API Terms of Use", both of which are checked. Below the checkboxes are "Edit" and "Create" buttons.

AppServ Open Project 8.6.0 x LINE Developers x LineBot+Python - 輕鬆建立聊天 x +

← → ↻ 🏠 🔒 <https://developers.line.biz/console/register/messaging-api/channel/confirm.html?provider=1571534426> 📄 ☆ 🖨️ | 🌐 :
🌐 應用程式 📄 聯成電腦官方首頁 📄 聯成電腦學員專區 📄 聯成電腦技術論壇 📄 聯成數位學院 📄 聯成電方部落格 📄 LCC聯成一體 📄 從名中翻英 📄 Autodesk開發 📄 Certipoint 📄 Google »

LINE Developers Products Documents News FAQ Community Blog 🔍 🖱️

Category Subcategory

購物、零售 3C、家電 (買賣、維修、包換)

Email address

`louischien557@gmail.com`

Privacy Policy URL

Terms Of Use URL

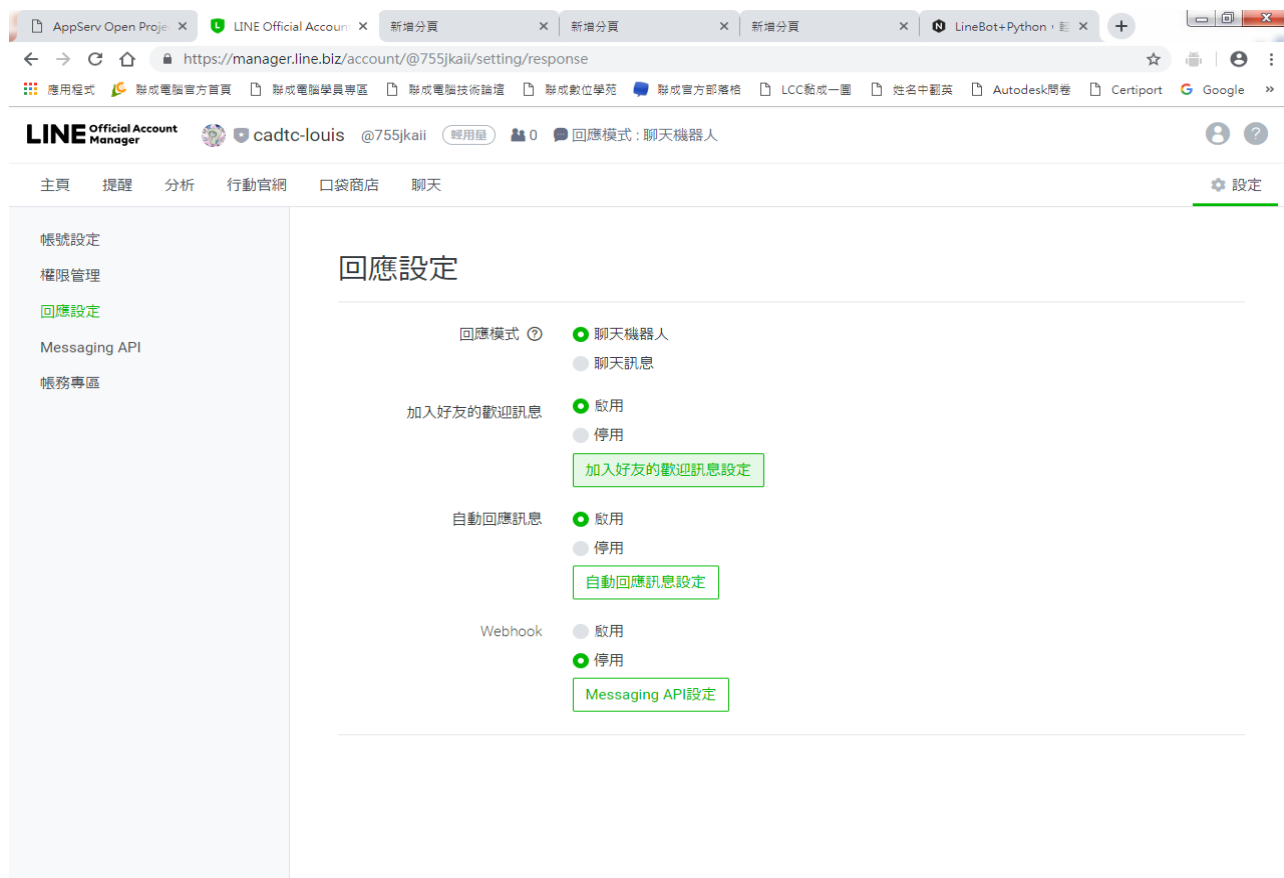
☒ [LINE Official Account Terms of Use](#) ⓘ I have read and agree to the Terms of Use.

☒ [LINE Official API Terms of Use](#) ⓘ I have read and agree to the Terms of Use.

Edit Create

Line Bot Set

- Line Bot Test



2020/7/10

Line Bot Set



Line Bot Set

LINE Official Account Manager

cadtc-louis @755jkali 輕用量 0 回應模式: 聊天機器人

主頁 提醒 分析 行動官網 口袋商店 聊天 設定

自動回應訊息

可設定當用戶傳訊給本帳號時，系統將自動回傳的訊息內容。

關鍵字 清除

標題	關鍵字	內容	指定日期或時間	狀態
Default	未登錄	感謝您的訊息 🙏 但很抱歉，本帳號無...	永遠	開啟 關閉

< 1 >

© LINE Corporation 服務條款 API服務條款 操作準則 著作權聲明

Line Bot Set

The screenshot shows the LINE Official Account Manager interface in a web browser. The browser's address bar displays the URL `https://manager.line.biz/account/@755jkai/setting/messaging-api`. The page header includes the LINE logo, the account name "cadtc-louis @755jkai", and a "設定" (Settings) button. A left sidebar contains navigation links: "帳號設定" (Account Settings), "權限管理" (Permission Management), "回應設定" (Response Settings), "Messaging API" (highlighted), and "帳務專區" (Billing Area). The main content area is titled "Messaging API" and contains the following information:

- 狀態** (Status): 使用中 (In Use)
- Channel資訊** (Channel Information):
 - Channel ID**: 1571535858 (with a "複製" / Copy button)
 - Channel secret**: c19b02a75cdec7c2cee147a3b5243c2 (with a "複製" / Copy button)
- Webhook網址** (Webhook URL): `https://` (with a "儲存" / Save button)

At the bottom of the main content area, a note states: "您可由LINE Developers進行其他設定。" (You can perform other settings from LINE Developers).

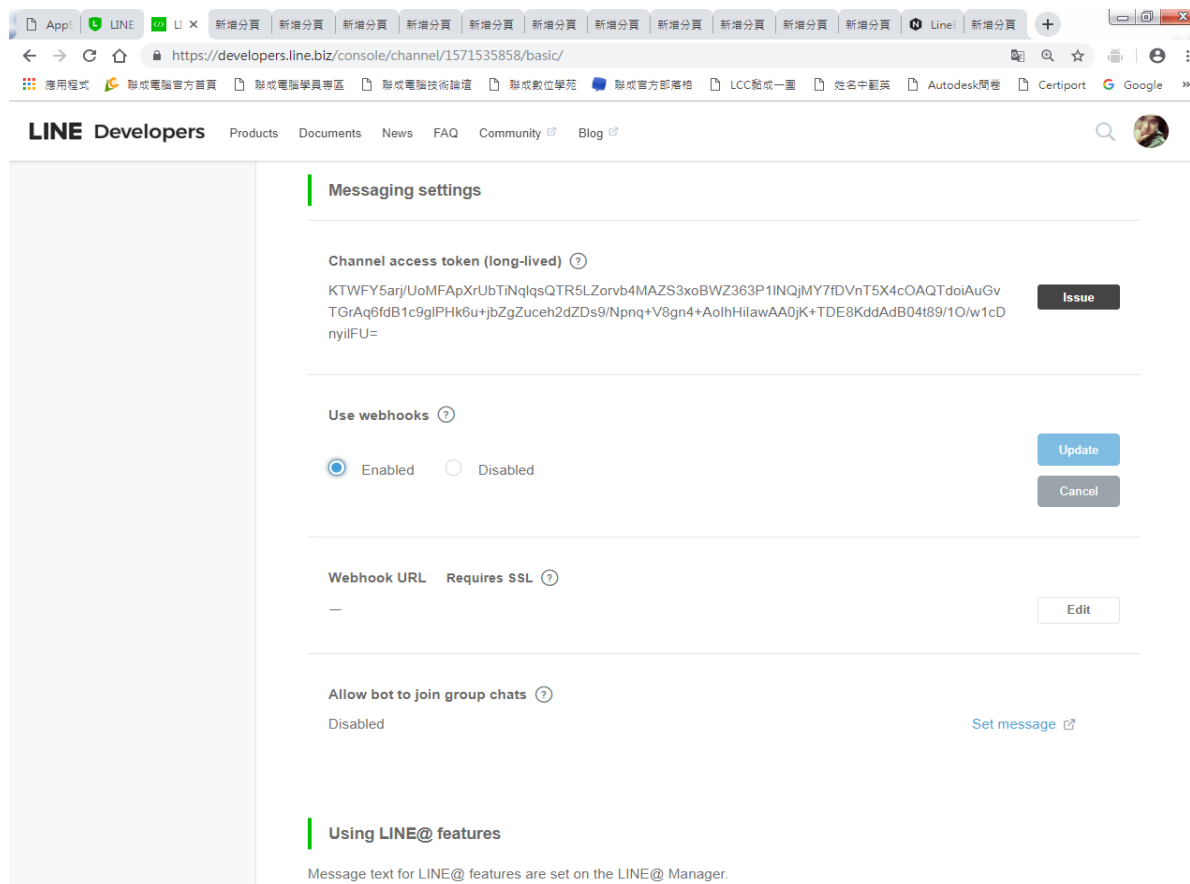
The footer of the page contains the following text: © LINE Corporation 服務條款 API服務條款 操作準則 著作權聲明

Line Bot Set

The screenshot displays the LINE Developers console interface. The browser address bar shows the URL <https://developers.line.biz/console/channel/1571535858/basic/>. The page title is "LINE Developers". The left sidebar contains a "Welcome" section with the user's name "志軒" and a settings gear icon, followed by "Providers" with an upward arrow, "Provider List" showing "cadtc-louis", "Tools", and "Support". The main content area shows the breadcrumb "TOP > Provider List > cadtc-louis > cadtc-louis > Channel settings". Below this is a header for "cadtc-louis" with a back arrow, a profile picture, the name "cadtc-louis", a "Messaging API" status, and an "Admin" button. A tabbed interface shows "Channel settings" as the active tab, with other tabs for "Security settings", "Roles", "Testers", "Statistics", and "LIFF". The "Channel settings" section includes a description: "Confirm and edit the basic information (such as the app name and icon) and other settings of the channel. Note: Only the 'Quit testing' button is displayed for testers." Below this is a "Basic information" section with a link to "Change informations". The "App icon" section shows a cartoon character icon. The "App name" section shows the name "cadtc-louis".

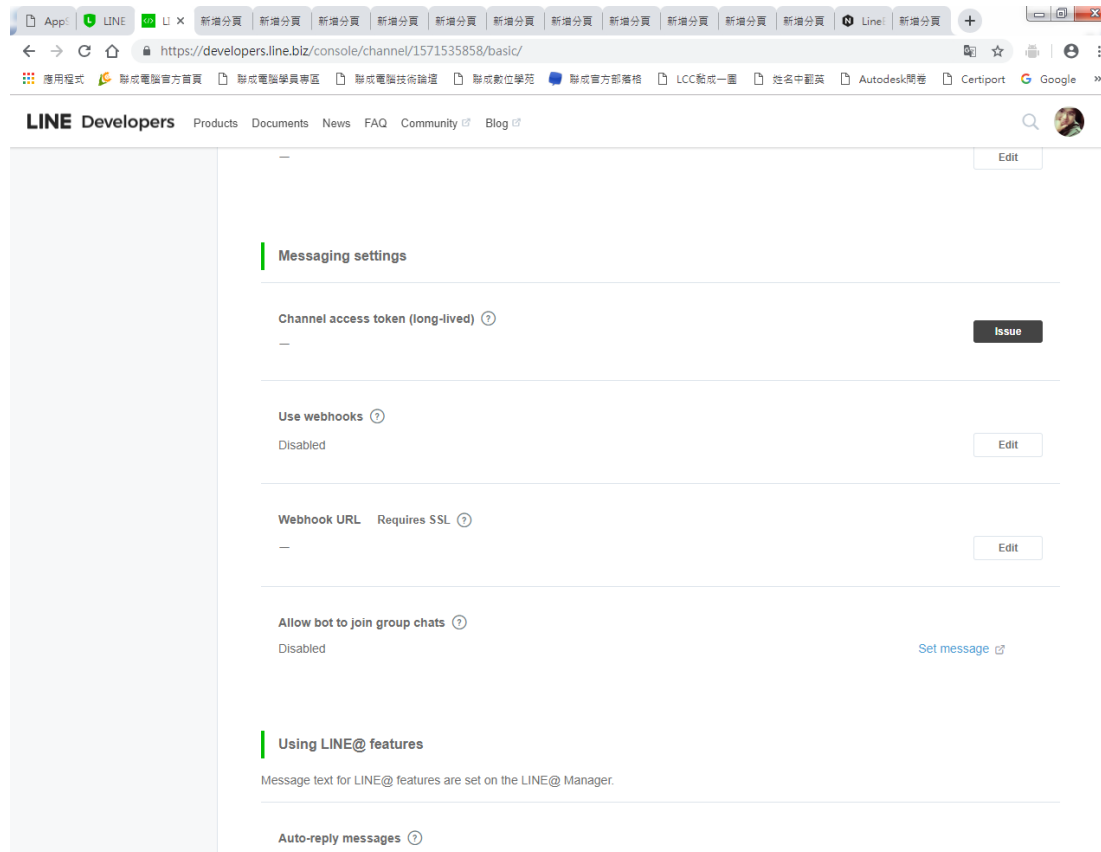
Line Bot Set

- 開啟 webhook



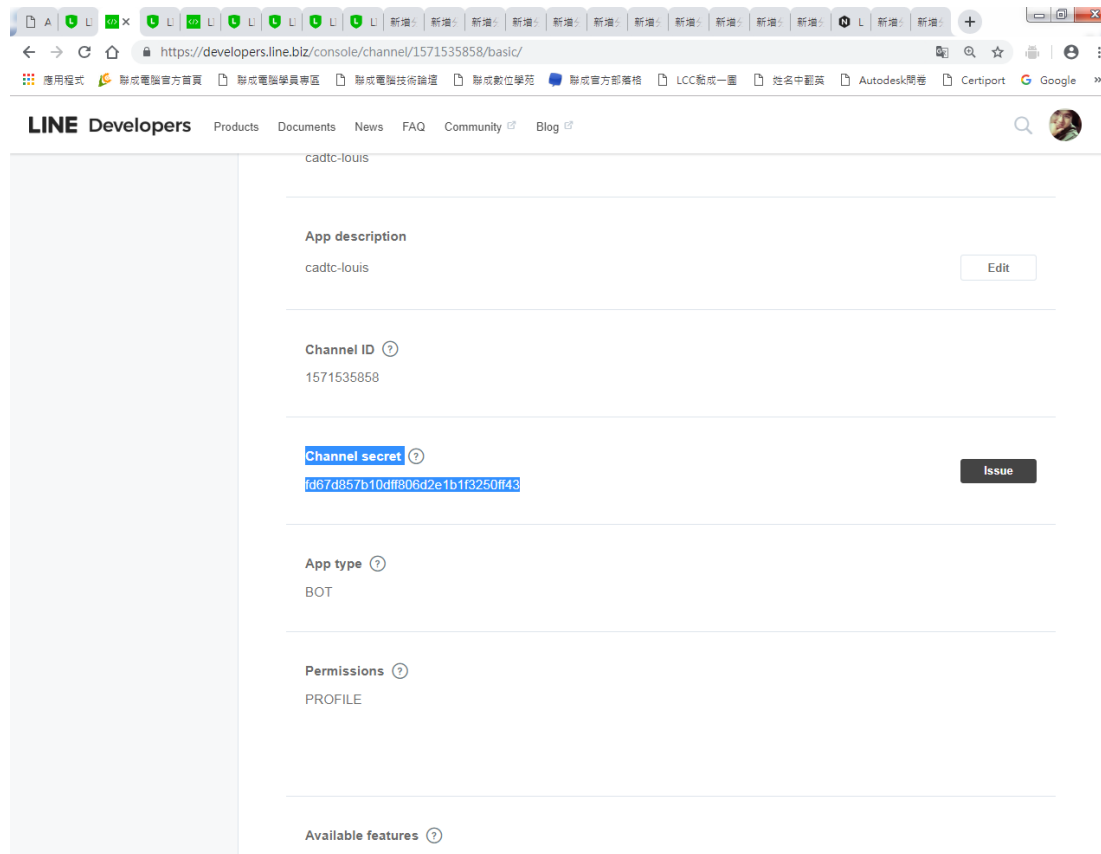
Line Bot Set

- 產生 Channel access token



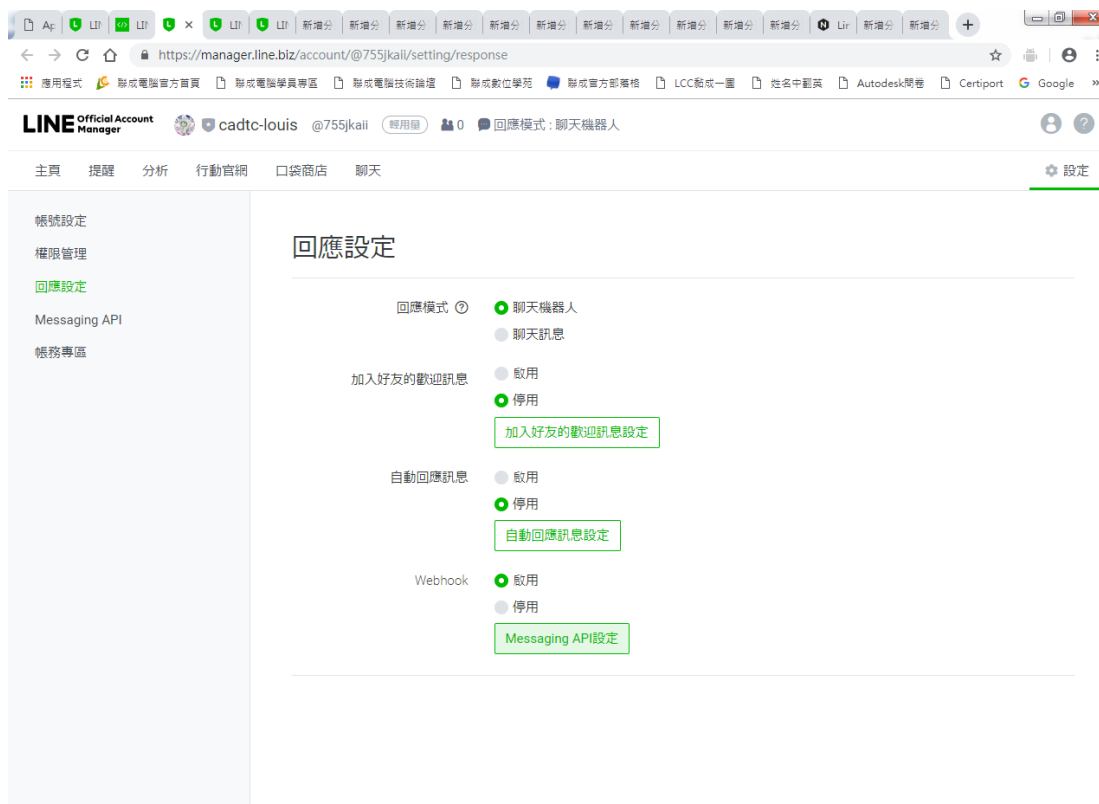
Line Bot Set

- 取得 Channel secret



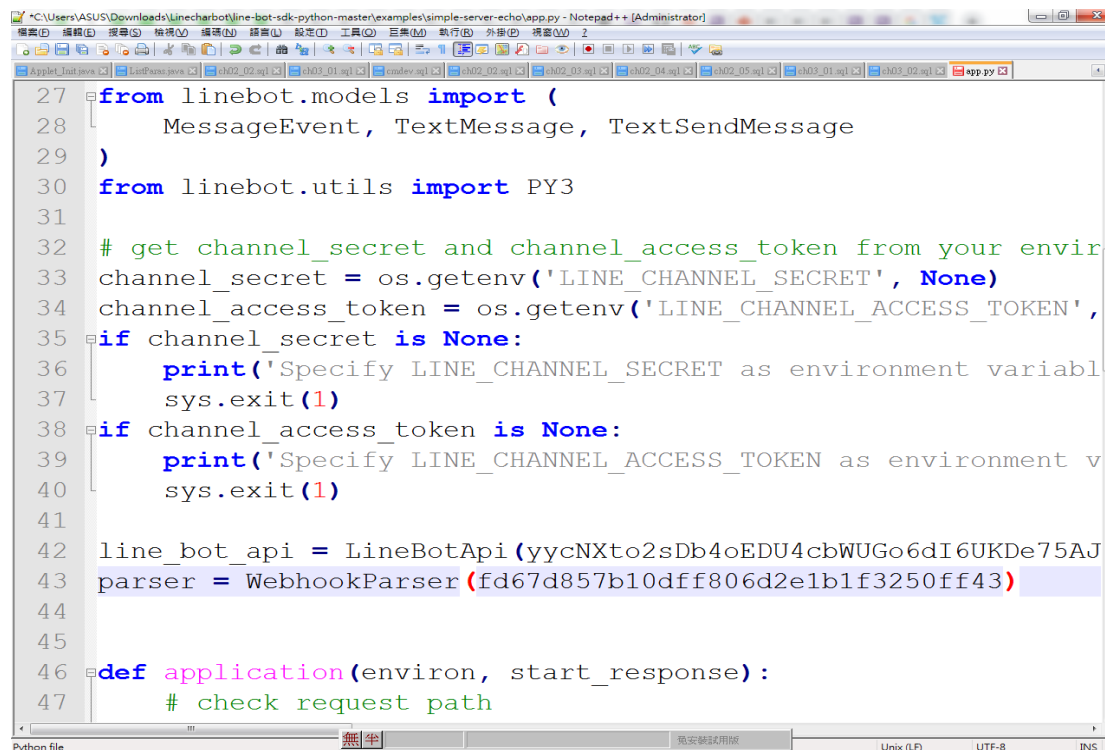
Line Bot Set

- 停用自動回覆啟用webhook



Line Bot Set

- 開啟範例程式碼資料夾內的 app.py，將剛剛取得的 channel secret 和 channel access token 填入



```
27 from linebot.models import (  
28     MessageEvent, TextMessage, TextSendMessage  
29 )  
30 from linebot.utils import PY3  
31  
32 # get channel_secret and channel_access_token from your envir  
33 channel_secret = os.getenv('LINE_CHANNEL_SECRET', None)  
34 channel_access_token = os.getenv('LINE_CHANNEL_ACCESS_TOKEN',  
35 if channel_secret is None:  
36     print('Specify LINE_CHANNEL_SECRET as environment variabl  
37     sys.exit(1)  
38 if channel_access_token is None:  
39     print('Specify LINE_CHANNEL_ACCESS_TOKEN as environment v  
40     sys.exit(1)  
41  
42 line_bot_api = LineBotApi(yycNXto2sDb4oEDU4cbWUGo6dI6UKDe75AJ  
43 parser = WebhookParser(fd67d857b10dff806d2e1b1f3250ff43)  
44  
45  
46 def application(environ, start_response):  
47     # check request path
```

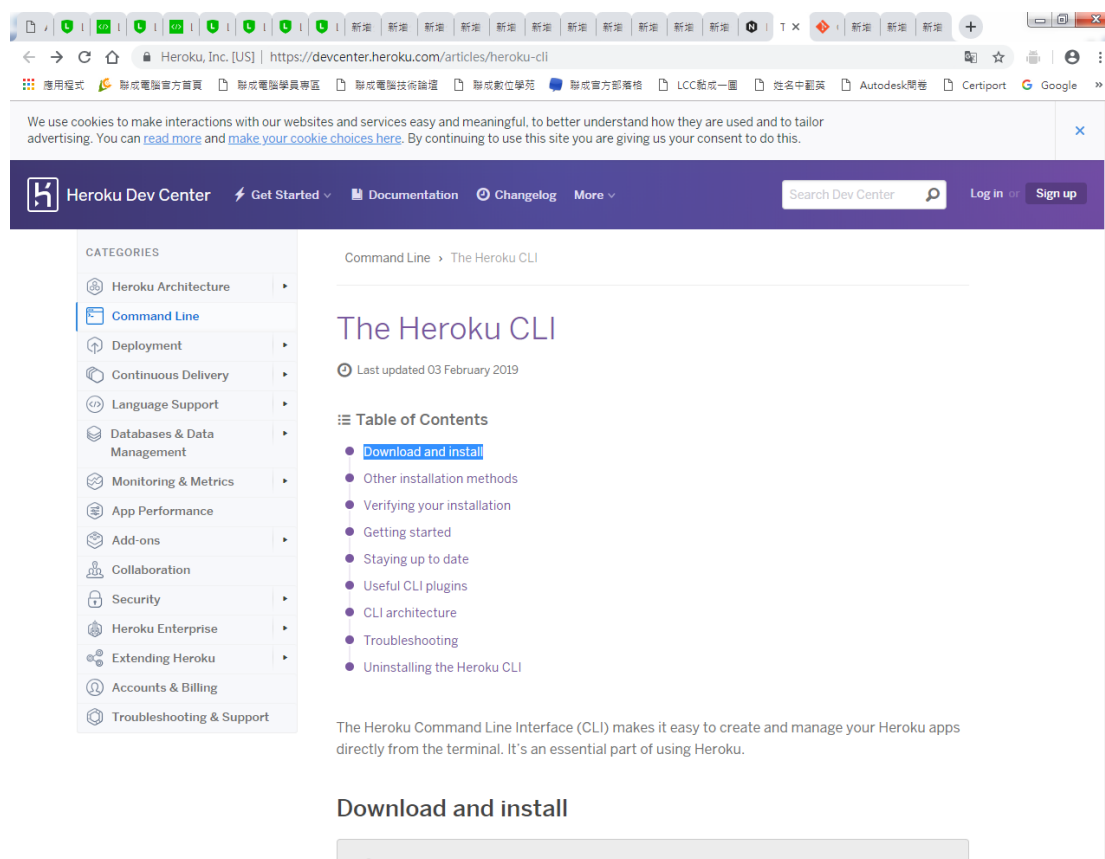
Heroku CLI

Louis

安裝 Heroku CLI

- 程式放進 Heroku 上
- 下載並安裝 [Heroku CLI](#)、[Git](#)
- 下載範例資料夾，在路徑上輸入 cmd
- 使用終端或命令行應用程序登錄到 Heroku

安裝 Heroku CLI



安裝 Heroku CLI

The screenshot shows the Heroku CLI download and install page. The browser address bar shows the URL: <https://devcenter.heroku.com/articles/heroku-cli#download-and-install>. The page title is "Download and install".

Download and install

The Heroku CLI requires Git, the popular version control system. If you don't already have Git installed, complete the following before installing the CLI:

- [Git installation](#)
- [First-time Git setup](#)

macOS

Download the installer

Also available via Homebrew:

```
$ brew tap heroku/brew && brew install heroku
```

Windows

Download the appropriate installer for your Windows installation:

[64-bit installer](#)

[32-bit installer](#)

Ubuntu 16+

Run the following from your terminal:

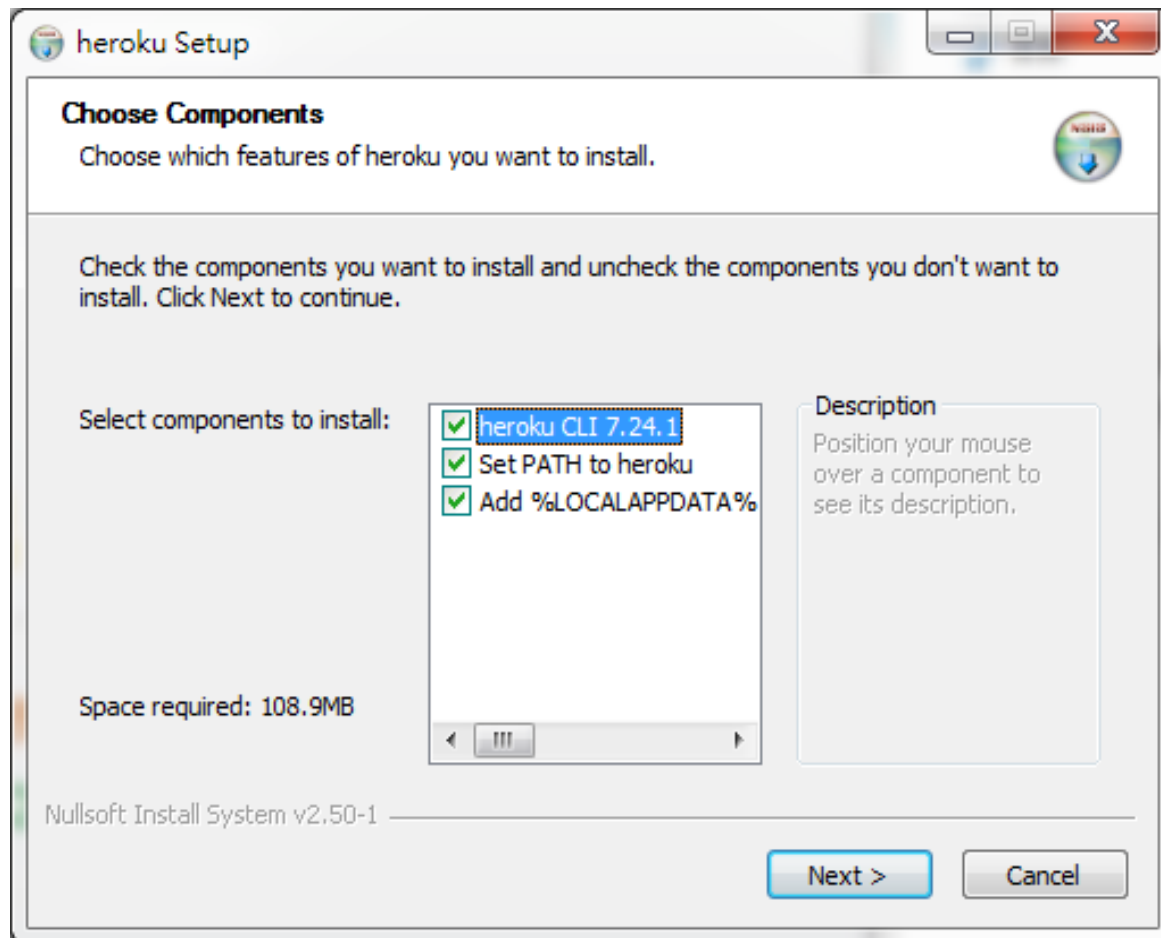
```
$ sudo snap install --classic heroku
```

[Snap is available on other Linux OS's as well.](#)

Other installation methods

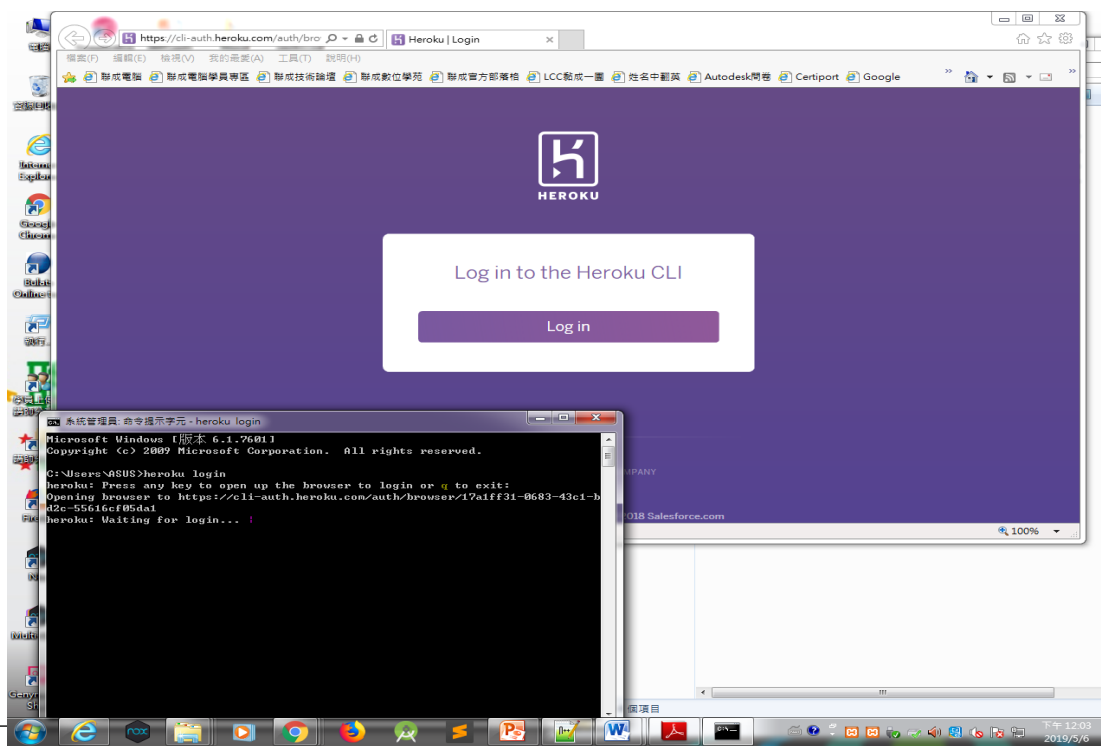
<https://cli-assets.heroku.com/heroku-x64.exe>

安裝 Heroku CLI

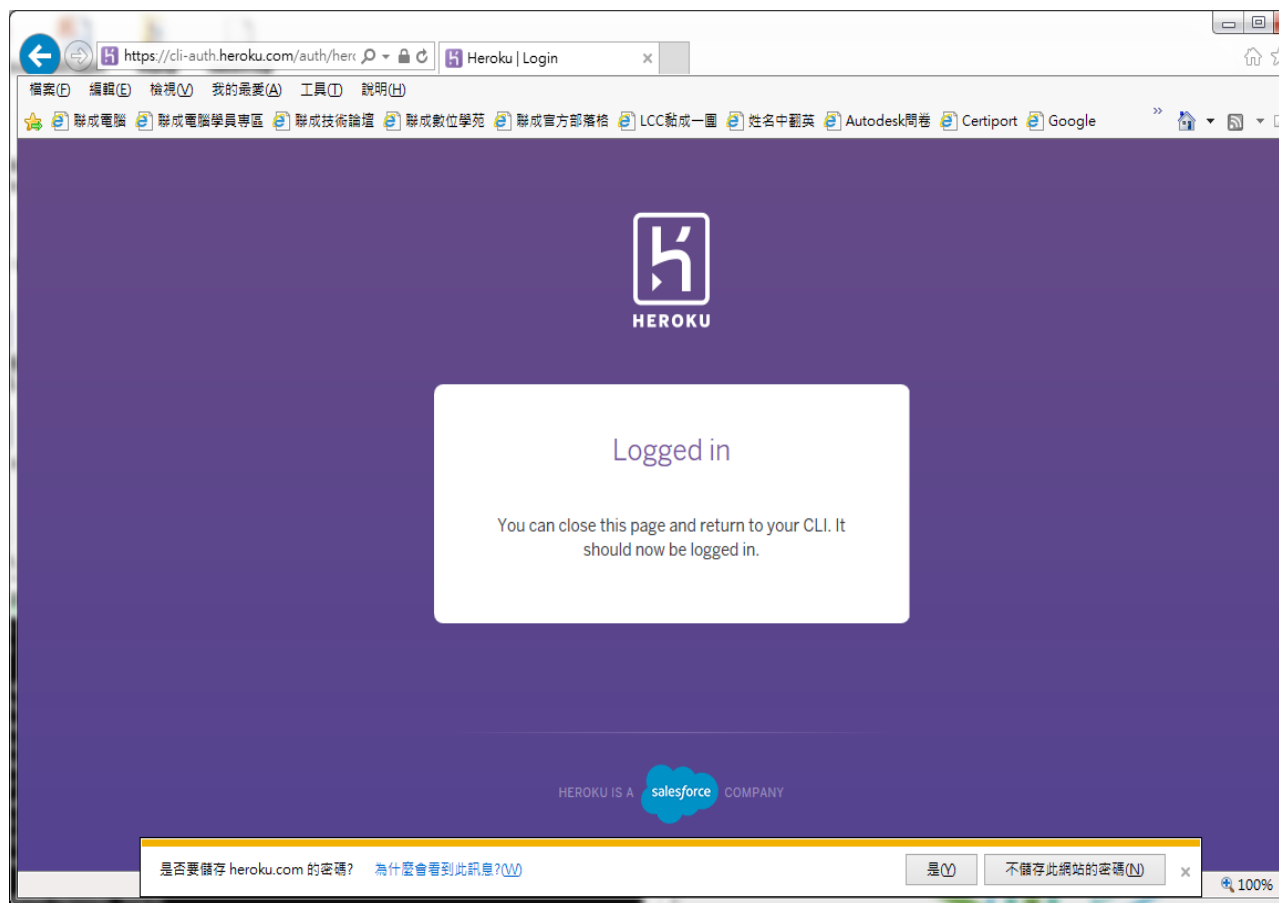


安裝 Heroku CLI

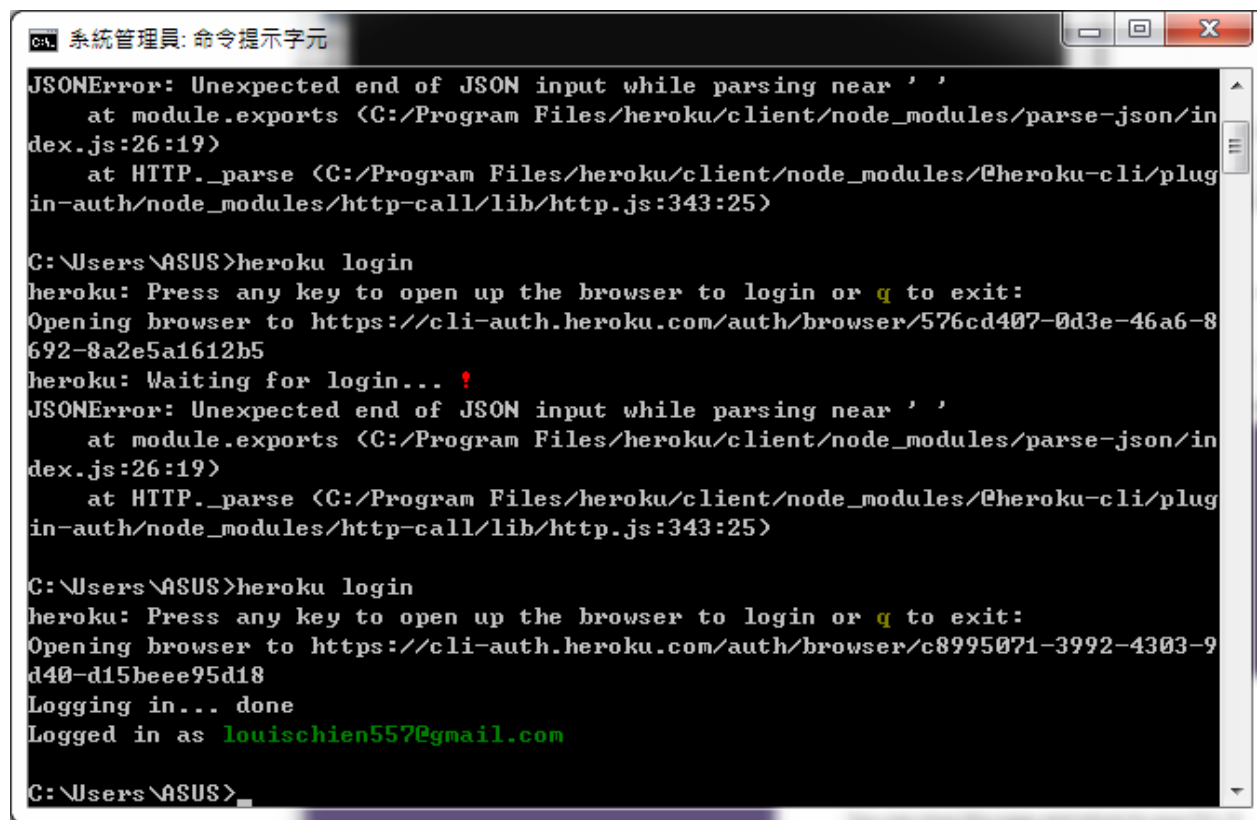
- heroku login
- 下載範例資料夾，在路徑上輸入 cmd
- 使用終端或命令行應用程序登錄到 Heroku



安裝 Heroku CLI



安裝 Heroku CLI



```
系統管理員: 命令提示字元

JSONError: Unexpected end of JSON input while parsing near ' '
    at module.exports <C:/Program Files/heroku/client/node_modules/parse-json/index.js:26:19>
    at HTTP._parse <C:/Program Files/heroku/client/node_modules/@heroku-cli/plugin-auth/node_modules/http-call/lib/http.js:343:25>

C:\Users\ASUS>heroku login
heroku: Press any key to open up the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/browser/576cd407-0d3e-46a6-8692-8a2e5a1612b5
heroku: Waiting for login... !
JSONError: Unexpected end of JSON input while parsing near ' '
    at module.exports <C:/Program Files/heroku/client/node_modules/parse-json/index.js:26:19>
    at HTTP._parse <C:/Program Files/heroku/client/node_modules/@heroku-cli/plugin-auth/node_modules/http-call/lib/http.js:343:25>

C:\Users\ASUS>heroku login
heroku: Press any key to open up the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/browser/c8995071-3992-4303-9d40-d15bee95d18
Logging in... done
Logged in as louischien557@gmail.com

C:\Users\ASUS>
```

Git

Louis

Git

The screenshot shows the Git website (git-scm.com) in a web browser. The browser's address bar displays "https://git-scm.com". The website has a light beige background with a grid pattern. At the top, there's a navigation bar with the Git logo and the tagline "--fast-version-control". Below this, a search bar is present. The main content area features two paragraphs of text describing Git as a free and open source distributed version control system, highlighting its speed, efficiency, ease of learning, and performance. To the right of the text is a diagram illustrating Git's branching model with stacks of boxes connected by colored lines. Below the text, there are four circular icons representing different sections: About (gears), Documentation (book), Downloads (down arrow), and Community (speech bubbles). Each icon is accompanied by a title and a brief description. To the right of these icons is a monitor displaying the latest source release (2.21.0) and a button to download for Windows. At the bottom, there's a section for "Companies & Projects Using Git" with logos for Google, Facebook, Microsoft, Twitter, LinkedIn, Netflix, and PostgreSQL. The browser's taskbar at the bottom shows several open applications, including a terminal, a file explorer, and various web browsers.

git --fast-version-control

Search entire site...

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.

About
The advantages of Git compared to other source control systems.

Documentation
Command reference pages, Pro Git book content, videos and other material.

Downloads
GUI clients and binary releases for all major platforms.

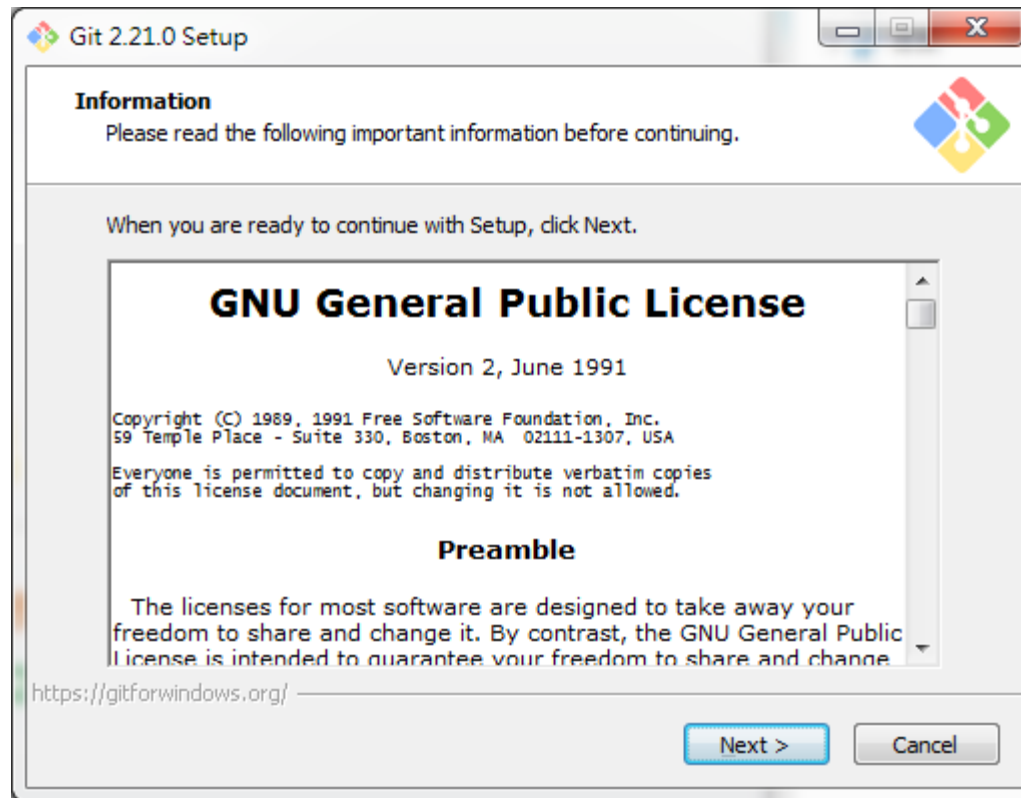
Community
Get involved! Bug reporting, mailing list, chat, development and more.

Latest source Release
2.21.0
Release Notes (2019-02-24)
[Download 2.21.0 for Windows](#)

Windows GUIs **Tarballs**
Mac Build **Source Code**

Companies & Projects Using Git
Google Facebook Microsoft Twitter LinkedIn NETFLIX PostgreSQL

Git



Git

- 初始化 git
 - `$ git config --global user.name "username"`
`$ git config --global user.email "email"`
- 初始化 git
 - `git init` (注意：僅第一次使用時要輸入)

Git

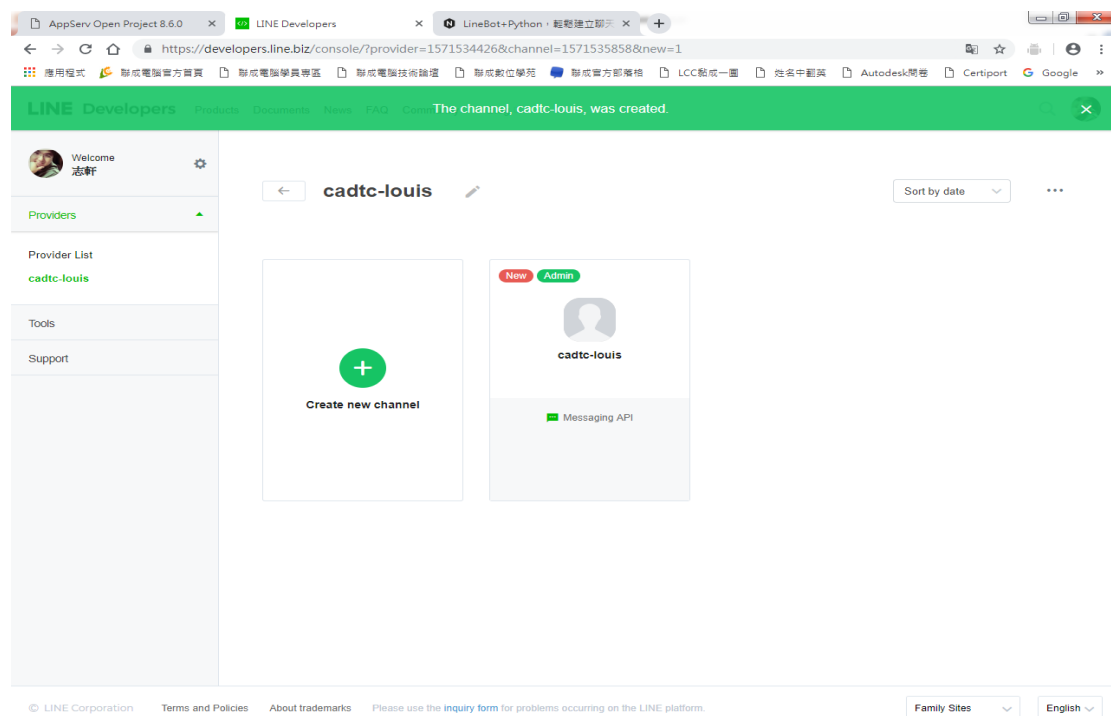
- 用 git 將資料夾與 heroku 連接
 - `heroku git:remote -a {HEROKU_APP_NAME}`
 - `{HEROKU_APP_NAME}` 是 Heroku 應用的名稱
- 輸入以下指令，將程式碼上傳至 Heroku，如果有跳出錯誤請重新輸入
 - `git add .`
`git commit -m "Add code"`
`git push -f heroku master`
- 每當需要更新 Bot 時，請重新輸入上述指令

Heroku 與 Line

Louis

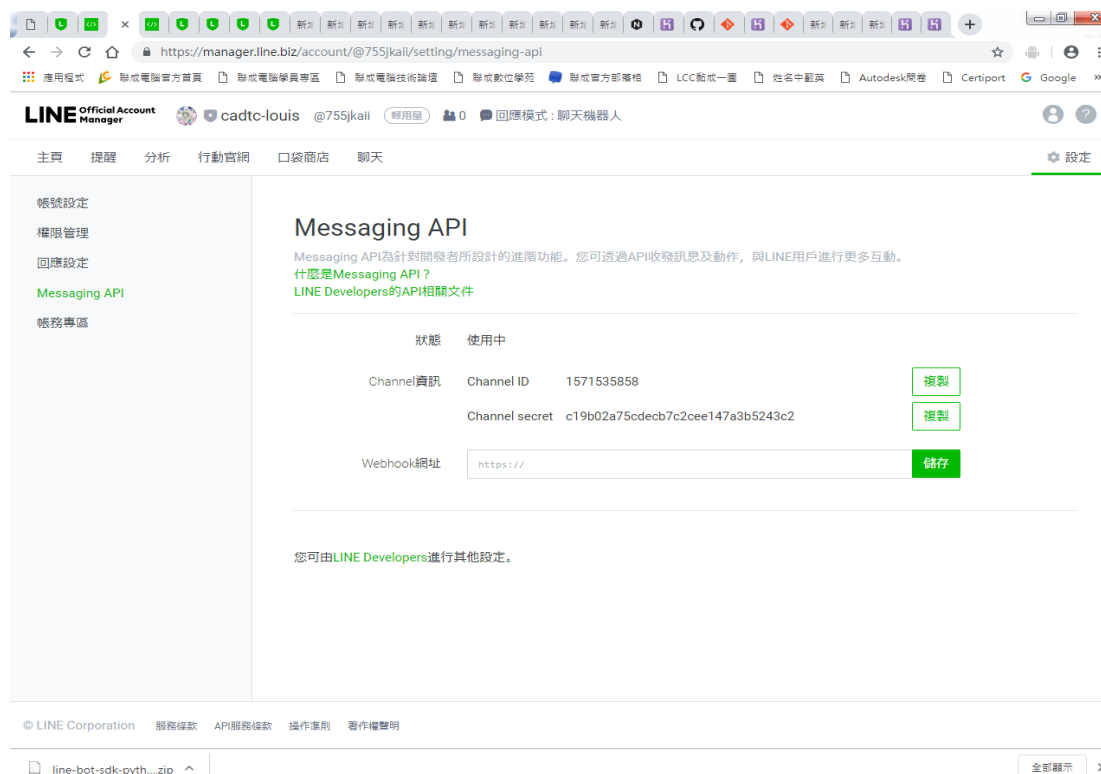
Heroku & Line

- 進入 Line 控制台，選擇Bot



Heroku & Line

- webhook URL 中輸入 Heroku 網址
- {HEROKU_APP_NAME}.herokuapp.com/callback



Heroku & Line

The screenshot shows the LINE Official Account Manager interface in a web browser. The browser's address bar displays the URL `https://manager.line.biz/account/@755jkali/setting/messaging-api`. The page header includes the LINE logo, the account name `cadtc-louis @755jkali`, and navigation links such as `主頁`, `提醒`, `分析`, `行動官網`, `口袋商店`, and `聊天`. A `設定` (Settings) link is highlighted in the top right.

The main content area is titled **Messaging API** and includes a brief description: "Messaging API為針對開發者所設計的進階功能。您可透過API收發訊息及動作，與LINE用戶進行更多互動。" Below this, there are links for [什麼是Messaging API?](#) and [LINE Developers的API相關文件](#).

The settings are organized into a table with two columns: **狀態** (Status) and **使用中** (In Use). The table contains three rows of configuration data:

狀態	使用中
Channel真訊	<div>Channel ID: 1571535858 複製</div> <div>Channel secret: c19b02a75cdec7c2cee147a3b5243c2 複製</div>
Webhook網址	<div><input type="text" value="https://cadtc-louis.herokuapp.com/callback"/> 儲存</div>

Below the table, a note states: "您可由LINE Developers進行其他設定。"

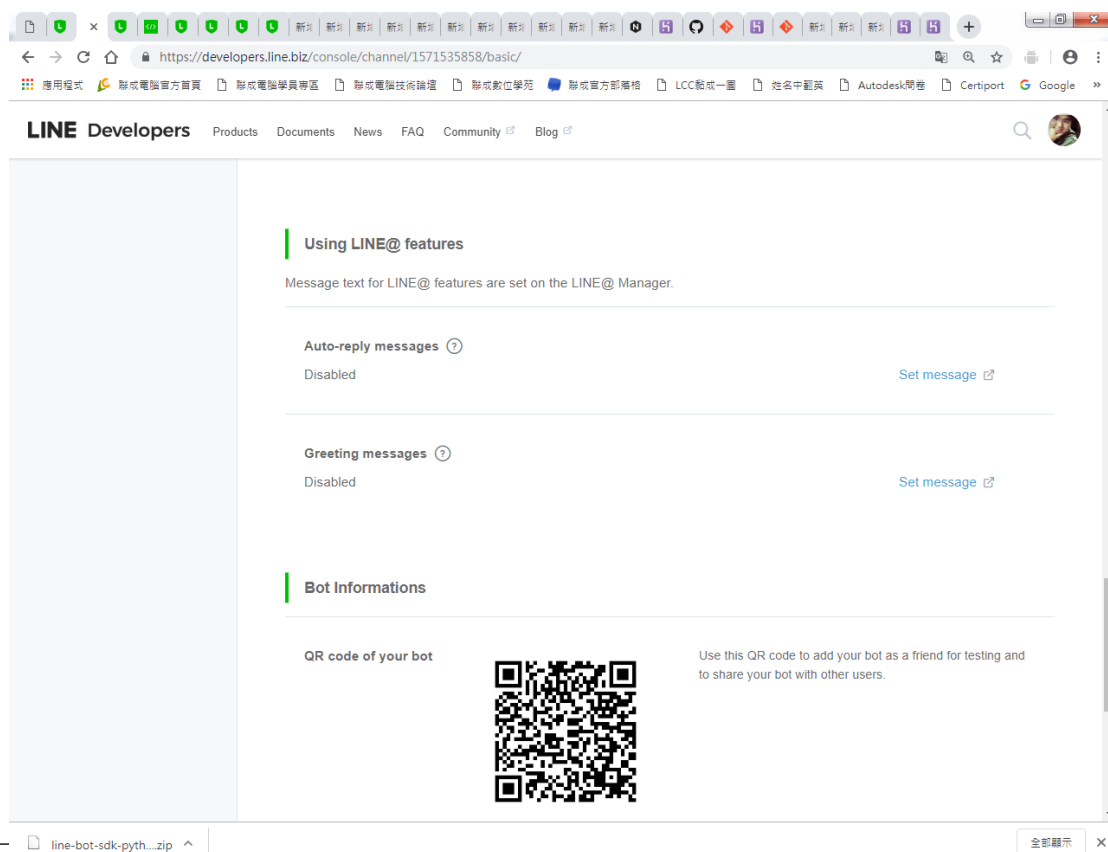
The footer of the page contains copyright information: "© LINE Corporation" and links to [服務條款](#), [API服務條款](#), [操作準則](#), and [著作權聲明](#). At the bottom right, there is a `line-bot-sdk-pyth...` file name and a `全部顯示` (Show All) button.

Line Bot Test

Louis

Line Bot Test

- 掃描 QR Code，將Bot 添加到 LINE 的朋友中
- 在 Line 上向Bot 發送文字訊息。



錯誤尋找

- 程式遇到問題時，可查看日誌以找出錯誤
- 查看 Bot 在 Heroku 的日誌
 - heroku login
- 顯示 app 日誌
 - heroku logs --tail --app {HEROKU_APP_NAME}
 - --tail # 持續打印日誌
 - --app {HEROKU_APP_NAME} # 指定 App

檔案解說

- 資料夾裡需含有兩份文件來讓你的程式能在 heroku 上運行
- Procfile：heroku 執行命令，web: {語言} {檔案}，這邊語言為 python，要自動執行的檔案為 app.py，因此改成 **web: python app.py**。
- requirements.txt：列出所有用到的套件，heroku 會依據這份文件來安裝需要套件

檔案解說

- **app.py (主程式)**
 - 可透過修改程式裡的 `handle_message()` 方法內的程式碼來控制機器人的訊息回覆

```
# 接收 callback() 丟過來的訊息中的“文字訊息”，並使用 line_bot_api.reply_message(event.reply_token, 傳送訊息物件) 進行回覆  
# 一條訊息只能回覆一次，若要回多條訊息，需使用 Line 付費功能 - Push API  
@handler.add(MessageEvent, message=TextMessage)  
def handle_message(event):  
    message = TextSendMessage(text='Hello World')  
    line_bot_api.reply_message(  
        event.reply_token,  
        message)
```

Line Bot進階操作

Louis

回覆訊息

- 官方文件
- 回覆訊息
 - 只有當有訊息傳來，才能回覆訊息
 - `line_bot_api.reply_message(reply_token, 訊息物件)`
 - 主動傳送訊息
 - Bot 需要有開啟 push 功能才可以做，否則程式會出錯
 - `line_bot_api.push_message(push_token, 訊息物件)`

回覆訊息

- 訊息物件分類
 - 官方文件
- 修改範例程式碼中， `handle_message()` 方法內的程式碼，可實現多種功能
 - `TextSendMessage`（文字訊息）
 - `message = TextSendMessage(text='Hello, world')`
`line_bot_api.reply_message(event.reply_token, message)`