

# AI Chatbot Workshop

By GS APWE

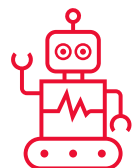


# Agenda



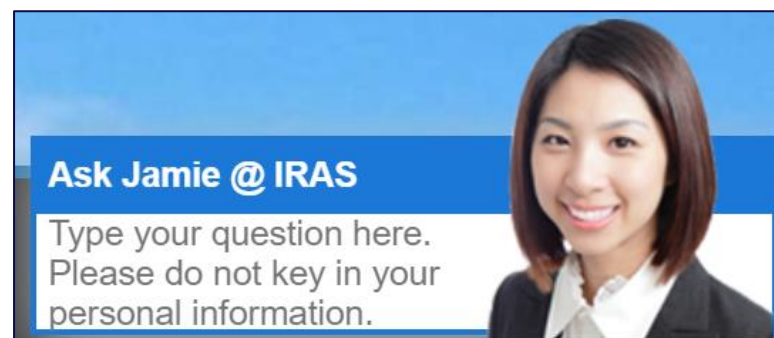
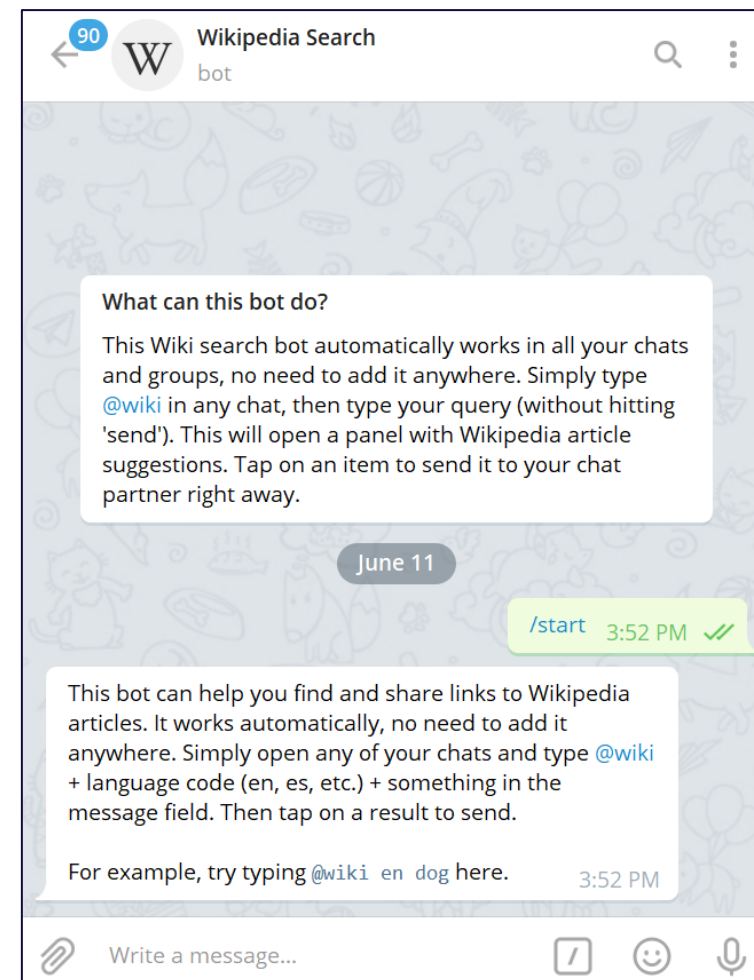
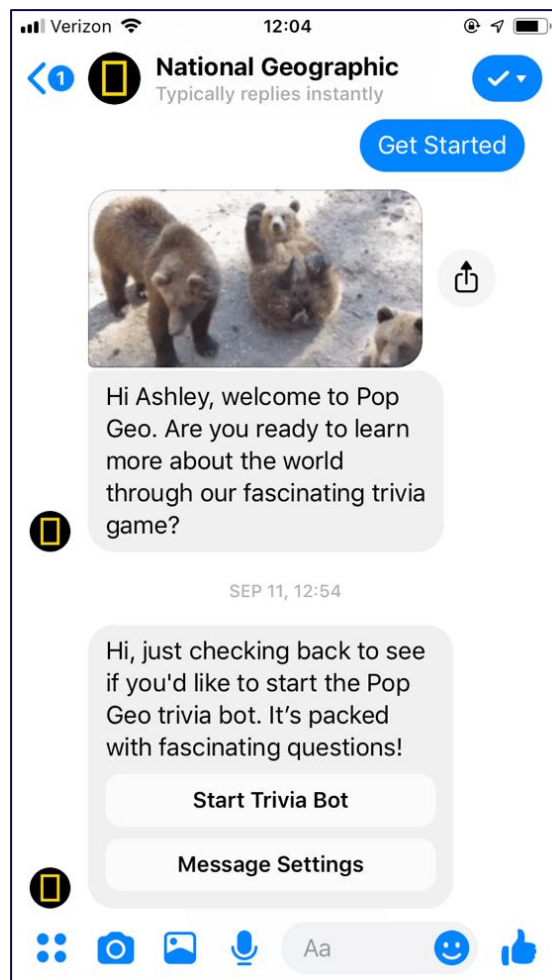
**Pre-requisite:** Install Telegram, create a Telegram bot token (and keep it as a secret!)

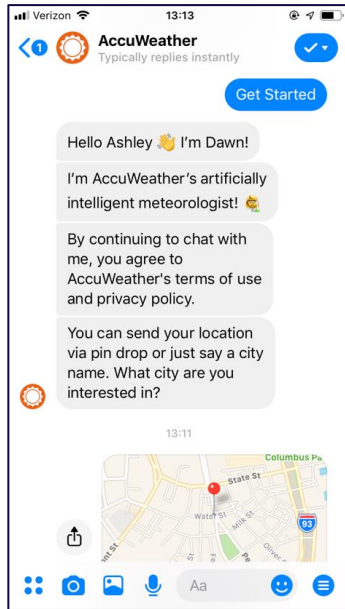
1. Run @apwe\_bot on Spyder or Jupyter Notebook
2. Learn about chatbot and Telegram API
3. Modify @apwe\_bot to send a new reply to the user



# About chatbot

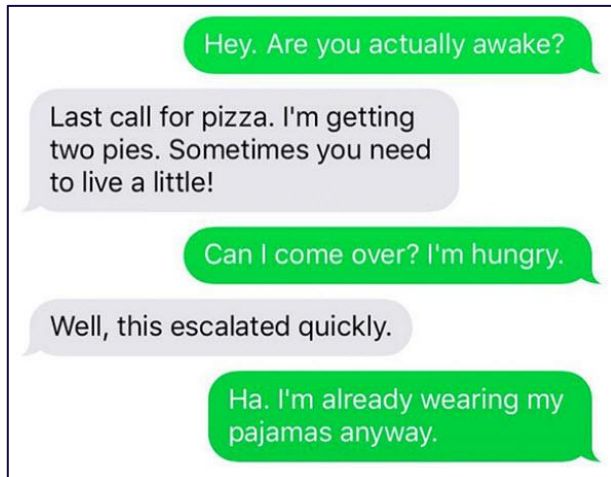
A script that keeps running  
and processes inputs from  
users to return outputs





## Command

Have a list of commands that the bot can understand (OCBC, DBS, IRAS, etc)



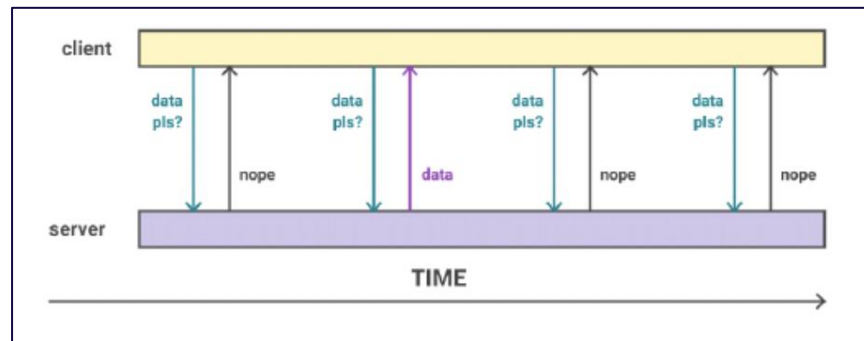
## Natural Language

User can type in any texts

<http://insomnobot3000.com/> by Casper

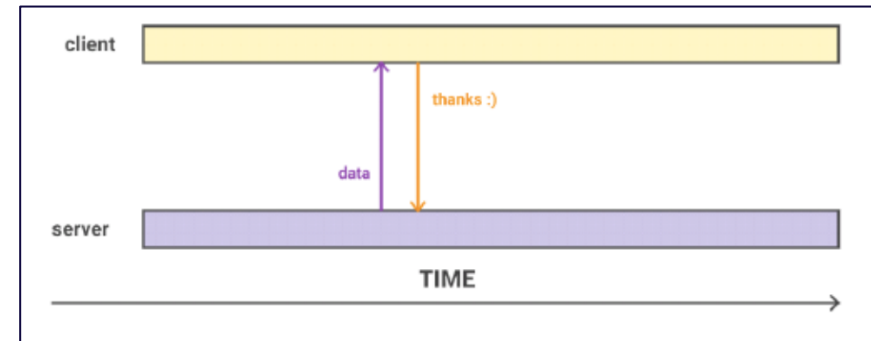
# Types of chatbot

# How can your bot receive messages?



## Polling

Repeatedly send requests to the server to get new data. If there's new data, it's sent back; otherwise, nothing is returned



## Webhook (not covered)

Server sends data to the bot as soon as it receives new data, and the bot must have a *listener* to listen to new data from the server

# Telegram API

(Application Programming Interface)

Simplest way to interact with the bot is through web browser. By visiting different URLs like below, we send different commands to the bot. There are two main commands that a bot needs:

## Get messages sent to your bot

<https://api.telegram.org/bot<your-telegram-token>/getUpdates>

Indicate that we  
want to interact  
with Telegram API

Specify the bot that we  
want to send the  
command to

Specify the  
command we  
want to send

## Send a reply to the user from your bot

[https://api.telegram.org/bot<your-telegram-token>/sendMessage?chat\\_id=<chat-id>&text=helloWorld](https://api.telegram.org/bot<your-telegram-token>/sendMessage?chat_id=<chat-id>&text=helloWorld)

# Telegram API

```
get_updates(offset=None, limit=100, timeout=0, read_latency=2.0, allowed_updates=None, **kwargs)
```

Use this method to receive incoming updates using long polling.

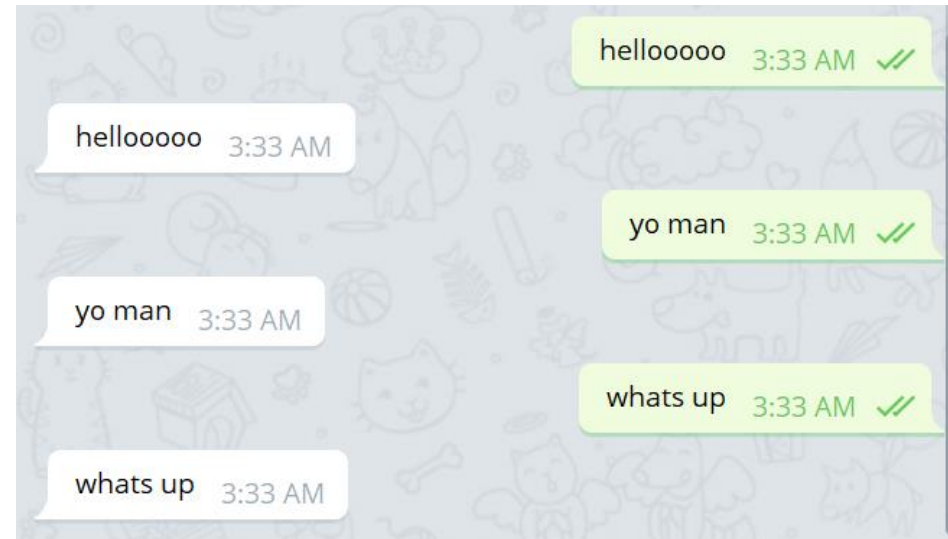
[https://python-telegram-bot.readthedocs.io/en/stable/telegram.bot.html#telegram.Bot.get\\_updates](https://python-telegram-bot.readthedocs.io/en/stable/telegram.bot.html#telegram.Bot.get_updates)

```
send_message(chat_id, text, parse_mode=None, disable_web_page_preview=None,  
disable_notification=False, reply_to_message_id=None, reply_markup=None, timeout=None, **kwargs)
```

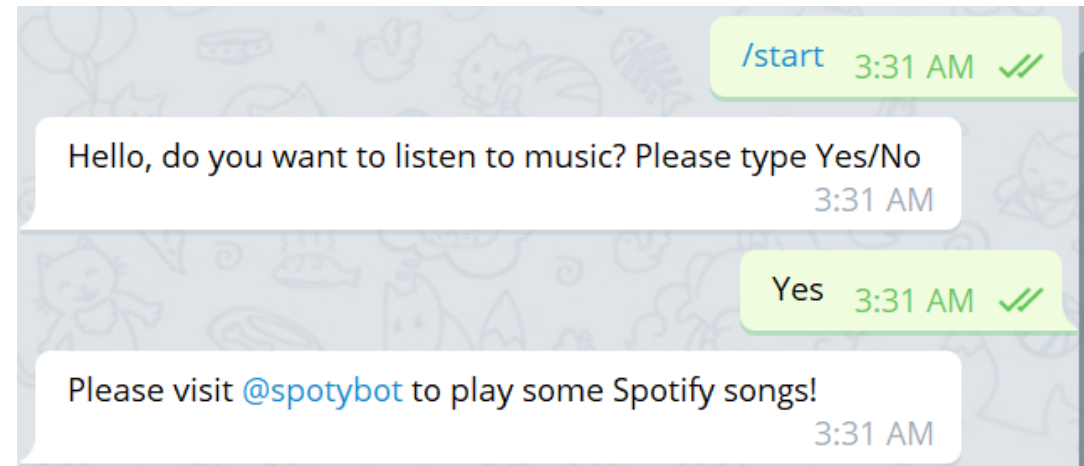
Use this method to send text messages.

[https://python-telegram-bot.readthedocs.io/en/stable/telegram.bot.html#telegram.Bot.send\\_message](https://python-telegram-bot.readthedocs.io/en/stable/telegram.bot.html#telegram.Bot.send_message)

# Improve @apwe\_bot

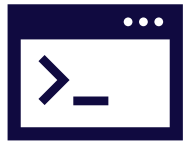


Currently, the bot just echoes your message.  
Let's make it friendlier!



Recommend @movieS4Bot when you reply  
"No" or recommend @spotybot when "Yes"





**Time for hands-on practice!**

# Public APIs



<https://skyscanner.github.io/slate/#api-documentation>



<https://developer.spotify.com/documentation/web-api/quick-start/>



<https://data.gov.sg/developer>



AccuWeather

<https://developer.accuweather.com/apis>



<https://developers.facebook.com/docs/instagram-api/>

Google APIs

<https://developers.google.com/apis-explorer>

# Try out some bots in Telegram

@gamebot - play games with friends

@spotybot - play Spotify music

@AlertBot - reminder bot

@movieS4Bot - find movie recommendations

@KelJourneyBot - estimate waiting time at bus station

**Thank you for coming!**