Tutorial 2
Scikit-learn and Telepot

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What is scikit-learn?

A machine learning package in python.

- Simple and efficient
- Detailed documentation

Train a text classifier

```
In [1]: from sklearn.naive_bayes import MultinomialNB
        from sklearn.feature_extraction.text import CountVectorizer

In [2]: docs = [
            "I didn't know this came from Canada, but it is very good. Very good!",
            "Though it's not for everyone, it is a genuinely brilliant.",
            "What I am trying to say is I have seen worst movies than this.",
            "At least if you have download it, you haven't wasted your time or money"
        ]
        labels = [1, 1, 0, 0]

In [3]: model = MultinomialNB()
        vectorizer = CountVectorizer()

In [4]: X = vectorizer.fit_transform(docs)
        model.fit(X, labels)

Out[4]: MultinomialNB(alpha=1.0, class_prior=None, fit_prior=True)

In [5]: model.predict_proba(vectorizer.transform(["Very good movie."]))

Out[5]: array([[0.08896797, 0.91103203]])
```

Scikit-learn

Dump and load models

```
In [6]: import pickle
        with open("model.pkl", "wb") as f:
            pickle.dump(model, f)

In [7]: with open("model.pkl", "rb") as f:
            model = pickle.load(f)

In [8]: model.predict_proba(vectorizer.transform(["Very good movie."]))

Out[8]: array([[0.08896797, 0.91103203]])
```

Deploy your model with telegram bot

1. Create a bot
2. Write logic codes
3. Run

1. Create a bot

Talk to BotFather

2. Write logic codes

```python
import time
import telepot
from telepot.loop import MessageLoop

def handle(msg):
    """
    A function that will be invoked when a message is
    recevied by the bot
    """
    content_type, chat_type, chat_id = telepot.glance(msg)

    if content_type == "text":
        content = msg["text"]
        reply = "You said: {}".format(content)
        bot.sendMessage(chat_id, reply)

if __name__ == "__main__":

    # Provide your bot's token
    bot = telepot.Bot("YOUR_TELEGRAM_BOT_TOKEN")
    MessageLoop(bot, handle).run_as_thread()

    while True:
        time.sleep(10)
```

message information

handle the message

Reply the message

listening

3. Run

python bot.py

Thank you!