

# WEB APP NLP

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# THE CHALLENGE

We want to you to create a web UI where you call an API that uses NLP to analyze, summarize and extract important information from news articles. This challenge should be solved using Python, you can choose the framework that best suits you.



# CHALLENGE ACCEPTED



[https://github.com/jdsuarezj/wj\\_developerchallenge](https://github.com/jdsuarezj/wj_developerchallenge)

# FEATURES

- Django
- Modular design template
- Python 3
- Bootstrap css
- SQLite fake DB
- Aylien API

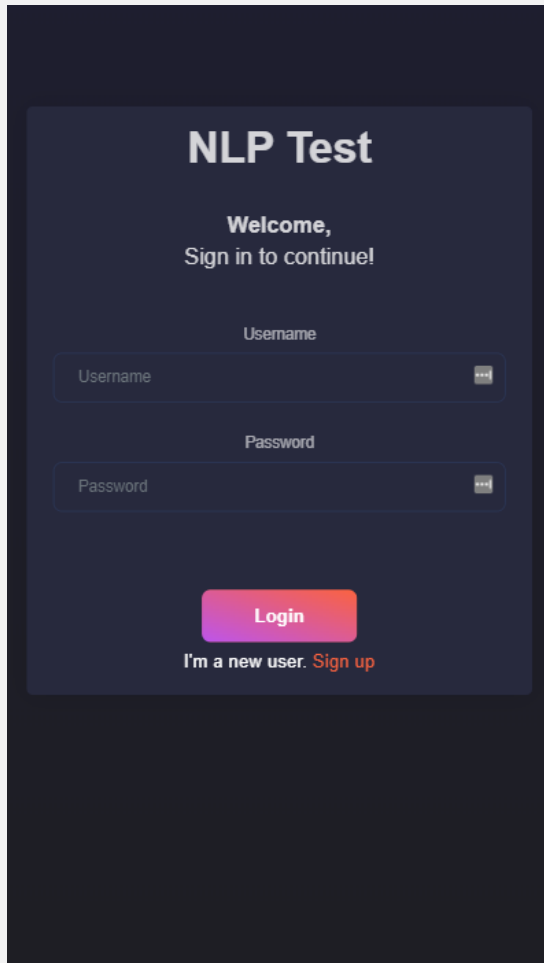


# PART 1

User creation and login

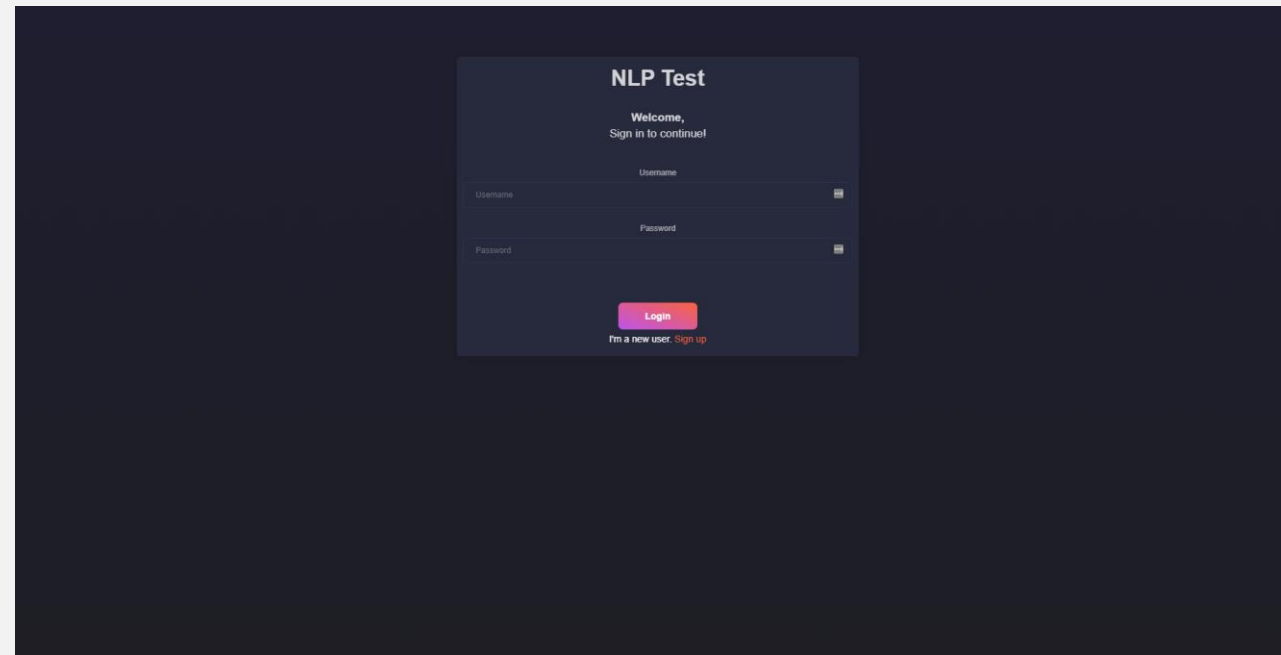
## Login

Mobile



The mobile login screen features a dark blue background. At the top, the text "NLP Test" is displayed in white. Below it, a welcome message "Welcome, Sign in to continue!" is shown. The form includes two input fields: "Username" and "Password", each with a placeholder text and a small eye icon for toggling visibility. A prominent "Login" button is located at the bottom, with a link "I'm a new user. Sign up" below it.

Desktop



The desktop login screen is centered on a dark blue background. It features the "NLP Test" title and a welcome message. The form contains "Username" and "Password" input fields, each with a placeholder and an eye icon. A "Login" button is positioned below the fields, with a link "I'm a new user. Sign up" underneath.

View designed for authentication and as initial screen.

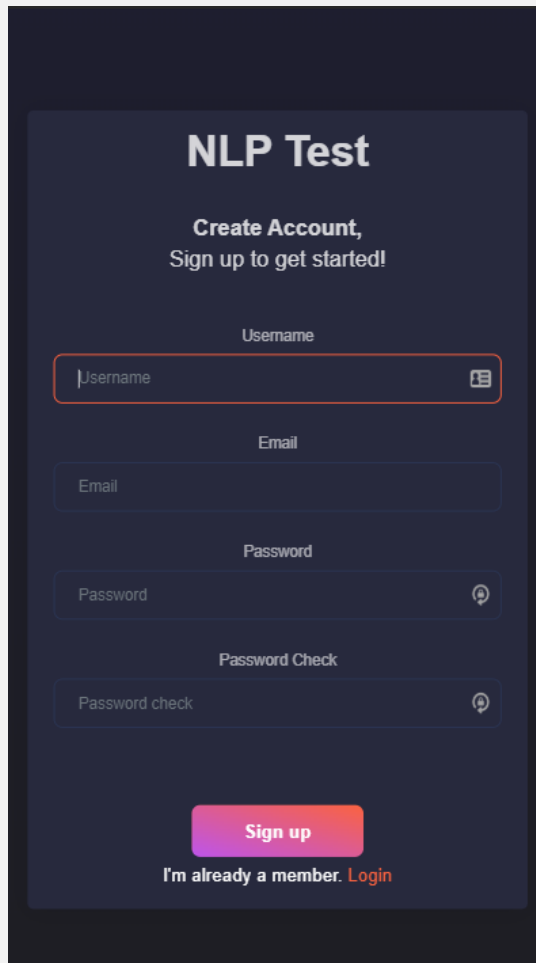
Authentication with Django middleware without handling errors or alerts.

# PART 1

User creation and login

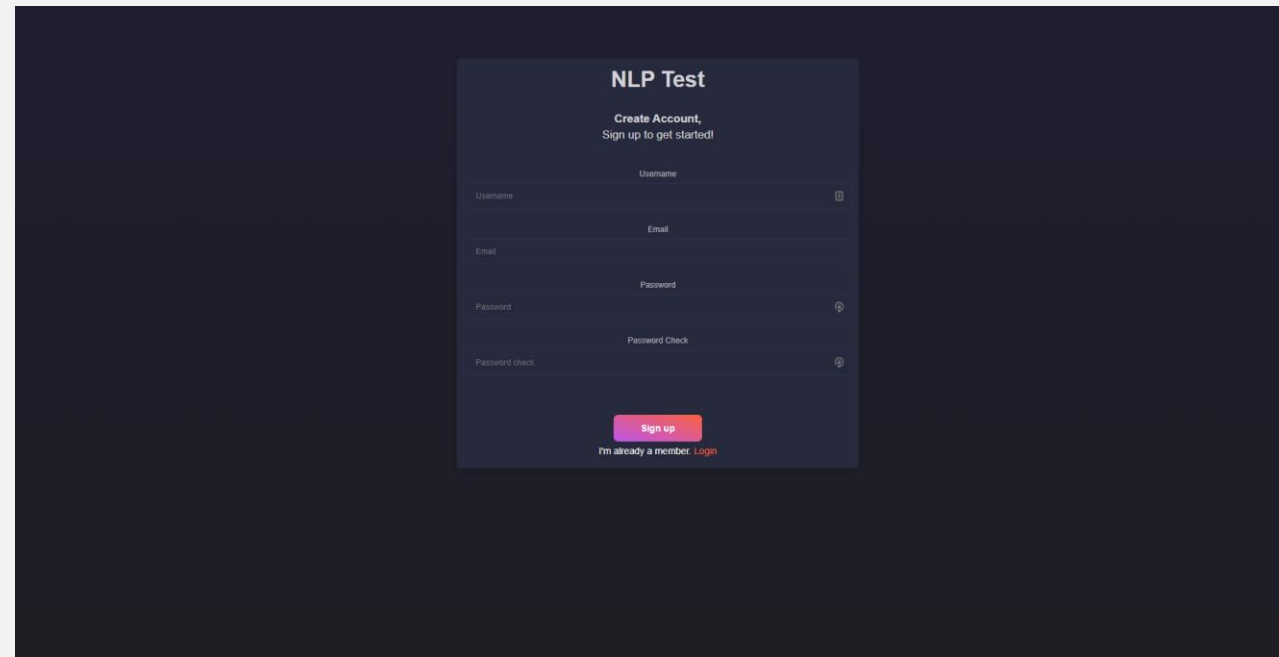
## Sign up

Mobile



The mobile view of the sign-up form is displayed on a dark background. It features a centered card with the title "NLP Test" and the subtitle "Create Account, Sign up to get started!". Below the subtitle are four input fields: "Username", "Email", "Password", and "Password Check". Each field has a placeholder text and a small icon on the right. The "Username" field is highlighted with a red border. At the bottom of the card is a pink "Sign up" button and a link "I'm already a member. Login" in red text.

Desktop



The desktop view of the sign-up form is displayed on a dark background. It features a centered card with the title "NLP Test" and the subtitle "Create Account, Sign up to get started!". Below the subtitle are four input fields: "Username", "Email", "Password", and "Password Check". Each field has a placeholder text and a small icon on the right. The "Username" field is highlighted with a red border. At the bottom of the card is a pink "Sign up" button and a link "I'm already a member. Login" in red text.

User creation and validation view.

Authentication with Django middleware without handling errors or alerts.

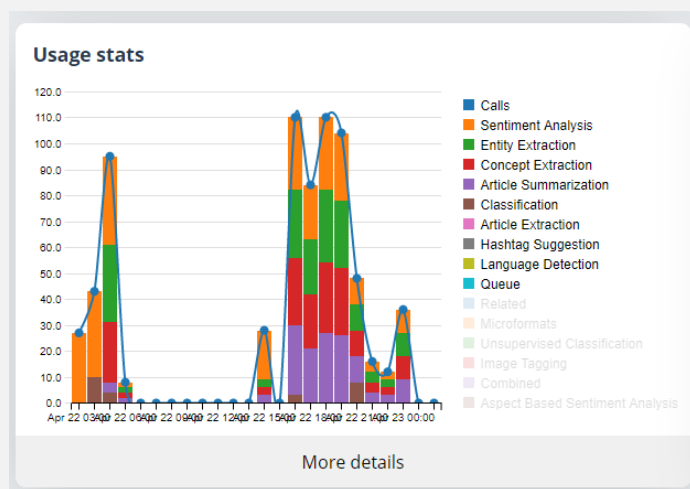


# PART 2

## Connect to Text API

### Aylien - Python SDK

#### 1. Aylien account



#### 2. Library installation from the requirements

#### 3. Import and config the API

```
from django.http import HttpResponse, JsonResponse
from .forms import ScanForm
import json
import sys

# Library for aylien textapi
from aylienapiclient import textapi
# Credentials API
client = textapi.Client('ID', 'KEY') #CHANGE THIS with your Aylien's credentials
```

#### 3. API Requests for each endpoint

```
# IndexView
# Render the index with the responses from the API
@login_required(login_url="/login/")
def index(request):
    if request.method == "POST":
        form = ScanForm(request.POST)
        if form.is_valid():
            # URL from the TextArea in the index view
            urlInput = form.cleaned_data.get('urlInput')
            # Params for request the API
            paramInput = {'url': urlInput}
            # Sentiment endpoint
            sentiment = client.Sentiment(paramInput)
            # Entities endpoint
            entities = client.Entities(paramInput)
            # Concepts endpoint
            concepts = client.Concepts(paramInput)
            conceptsResult = [ v for v in concepts['concepts'].values() ]
            # Summarize endpoint
            summarize = client.Summarize(paramInput)

            # Return the data to the view
            return render(
                request, 'pages/scan.html',
                {
                    'form': form,
                    'text': sentiment['text'],
                    'polarity': sentiment['polarity'],
                    'subjectivity': sentiment['subjectivity'],
                    'polarity_confidence': (sentiment['polarity_confidence'])*100,
                    'subjectivity_confidence': (sentiment['subjectivity_confidence'])*100,
                    'entities': entities['entities'],
                    'concepts': conceptsResult,
                    'summarize': summarize['sentences']
                }
            )
        else:
            form = ScanForm()
            return render(request, 'index.html', {'form': form})
```

# PART 3

## Build UI

### Home

*Where the user enters the URL.*

In this view it is explained that it is NLP, which is Aylien. It is displayed clearly and easy to use and with a single button. Also, some author references are left talking about NLP and its benefits.

DISCOURSE ANALYSIS

Welcome, **Daniel**

Natural Language Processing, or NLP, is the sub-field of AI that is focused on enabling computers to understand and process human languages.

The **AYLIEN Text Analysis API** allows you to extract value from a wide range of documents and publications with ease. How it works: The API leverages the power of natural language processing to mine meaning and insights from documents. It performs document-level, aspect-based, and entity-level sentiment analysis for understanding human-produced textual content.

API features: The AYLIEN Text Analysis API has extensive functionalities to assist developers in deriving useful value from textual data — including sentiment, summaries, categories, and entities. AYLIEN also has a News API for analyzing thousands of streams of news content and Text Analysis Platform API for creating customized natural language processing models quickly. It supports seven different languages. *WRITTEN BY: Jed Ng*

**You can test the power of NLP, copy a news link and paste it below, and get ready to see the magic!**

*Example: <https://techcrunch.com/2019/12/22/who-will-the-winners-be-in-the-future-of-fintech/>*

Paste here the URL

SCAN

#### Can Computers Understand Language?

As long as computers have been around, programmers have been trying to write programs that understand languages like English. The reason is pretty obvious — humans have been writing things down for thousands of years and it would be really helpful if a computer could read and understand all that data. Computers can't yet truly understand English in the way that humans do — but they can already do a lot! In certain limited areas, what you can do with NLP already seems like magic. You might be able to save a lot of time by applying NLP techniques to your own projects.

*WRITTEN BY: Adam Geitgey*

#### Use Cases of NLP

In simple terms, NLP represents the automatic handling of natural human language like speech or text, and although the concept itself is fascinating, the real value behind this technology comes from the use cases. NLP can help you with lots of tasks and the fields of application just seem to increase on a daily basis. Let's mention some examples: **prediction of diseases, sentiment analysis, cognitive assistant, stopping spam, identify fake news, voice driven interfaces, financial traders, talent recruitment and litigation tasks**

*WRITTEN BY: ODSC - Open Data Science*



# PART 3

## Build UI

### Scan

*Where is the analysis.*

The article analysis is shown in an orderly and easy to understand way. The classification endpoint presented errors with some articles.

DISCOURSE ANALYSIS

Welcome, Daniel

Sentiments

Polarity: **Neutral**

Subjectivity: **Subjective**

Polarity confidence: **59.896183013916016 %**

Subjectivity confidence: **100.0 %**

Entities

Organizations: Plaid, Its, Target, Salesforce, Lyft, Visa, Mastercard, Stripe Capital, Plaid, Stripe, Robinhood,

Locations: UK, France, Spain, Ireland,

Keywords: companies look to accept payment for services, financial products because fintechs, business of companies, Plaid's business, services like Stripe, Stripe enables anyone to accept and make payments, financial services, products associated with that data, financial products, fintech and financial, companies, Plaid, Stripe, business, services, payments, data, financial, products, fintech,

Persons : Milanovic, Here, Zach Perret, Carl Tremblay, Funding Circle, Venmo, Processing, Stripe Atlas,

Summarize

For those unfamiliar with Plaid's business model, it operates as the data exchange and API layer that ties financial products together. It's possible in 2020 to build a range of powerful financial products because fintechs can pull in robust data through aggregator services like Plaid, so a bet on the fintech industry is, in a sense, a derivative bet on Plaid. As long as more companies look to accept payment for services in some digital form, whether online or by phone, Stripe is well-positioned to be the intermediary. The company's success has allowed Stripe to branch into other services like Stripe Capital to lend directly to ecommerce companies based off their cashflow, or the Stripe Atlas turnkey tool for forming a new business entirely. Similar to Plaid, Stripe has a data network effects business, which means that as it collects more data by virtue of its transaction-processing business, it can leverage this core competency to launch more products associated with that data.

Extracted text

Nik Milanovic is a fintech and financial inclusion enthusiast, with a decade of work across mobile payments, online lending, credit and microfinance. The opinions expressed in his articles do not reflect those of his employer(s). More posts by this contributor So what happens when fintech "brings it all together"? In a world where people access their financial services through one universal hub, which companies are the best-positioned to win? When open data and protocols become the norm, what business models are set to capitalize on the resulting rush of innovation, and which will become the key back-end and front-end products underpinning finance in the 2020s? It's hard to make forward-looking predictions that weather a decade well when talking about the fortunes of individual companies. Still, even if these companies run into operating headwinds, the rationale for their success will be a theme we see play out over the next ten years. Here are five companies positioned to win the 2020s in fintech: 1. Plaid In 2014, I met Zach Perret and Carl Tremblay when they reached out to pitch Funding Circle on using Plaid to underwrite small and medium businesses with

Concepts

WORDS	SCORE
Robinhood	0.5657090544700623
data security	0.8666664968000183
derivative	0.8986784219741821
France	0.9971245527267456
protocol	0.9664683938026428
free product	1.0
digital wallets	1.0
open data	1.0
Salesforce	0.9992855787277222
open-source	0.9016829133033752
mobile payments	1.0
Spain	0.9946665167808533
payments online	1.0
microfinance	0.9983891248703003
pole position	0.9969164133071899
business model	1.0
pitch	0.805288553237915
core competency	1.0

# PART 3

Build UI

## Extra: User profile

A quick layout of the fake user profile page.

The image shows a dark-themed user profile page. At the top left, it says 'DISCOURSE ANALYSIS'. At the top right, it says 'Welcome, Daniel' next to a user avatar. The main content area is titled 'My account'. It contains several input fields: 'Username' (with 'Daniel' and a profile icon), 'Email address' (with 'demo@demo.es'), 'First Name', 'Last Name', 'Address', 'City', and 'Country'. A 'Save' button is at the bottom.

DISCOURSE ANALYSIS

Welcome, Daniel

### My account

Username: Daniel

Email address: demo@demo.es

First Name:

Last Name:

Address:

City:

Country:

Save

# GRACIAS

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