



PreLearn

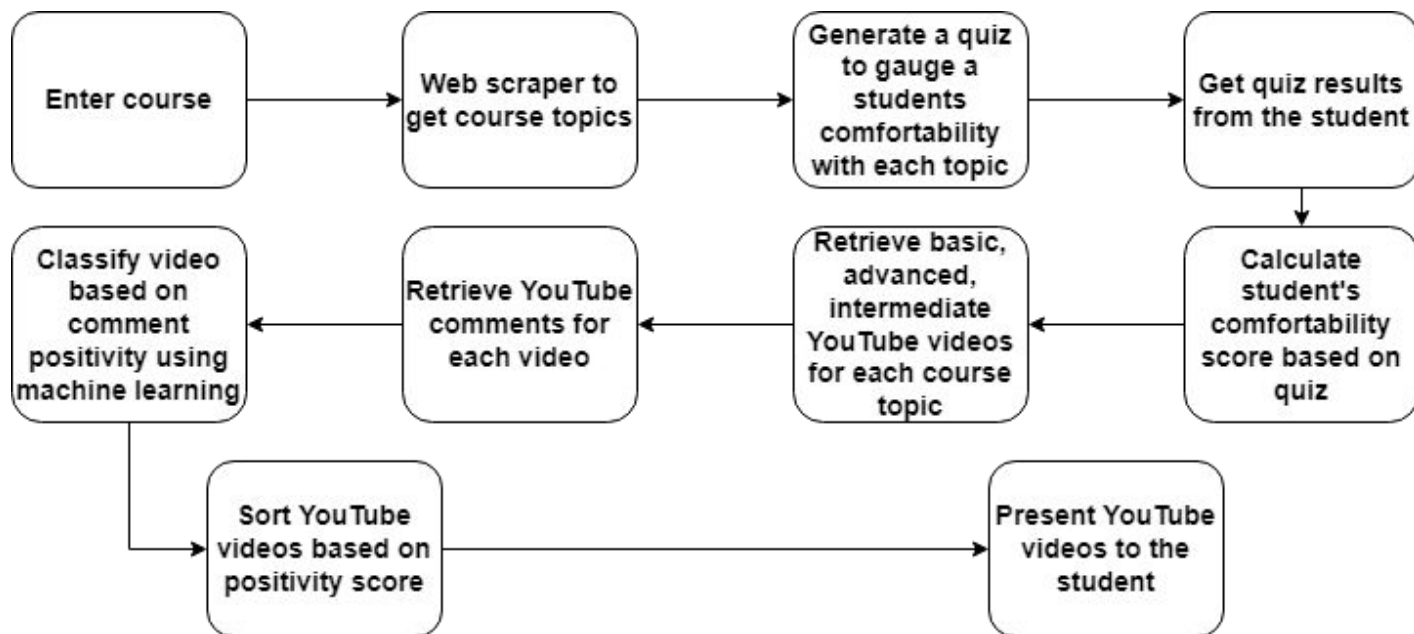
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Design



Web Scraping

```
1 const puppeteer = require('puppeteer');
2
3 (async () => {
4   const browser = await puppeteer.launch();
5   const page = await browser.newPage();
6
7   await page.goto('https://academiccalendars.romcmaster.ca/content.php?catid=47&navoid=9430');
8
9   const keywordContent = await page.$eval("input[id=course_filter_keyword]", element => element.value);
10  console.log(keywordContent.value);
11
12  // example: get innerHTML of an element
13  await page.focus("input[id=course_filter_keyword]");
14  await page.keyboard.type("[value='COMPENG 4TN4']");
15  await page.keyboard.press("Enter");
16  await page.waitForNavigation();
17
18  const newKeywordContent = await page.$eval("input[id=course_filter_keyword]", el => el.value);
19  console.log(newKeywordContent);
20
21 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
22 [Running] node "c:\Users\azrie\OneDrive\Desktop\DeltaHacks_2023\webscrapping.js"
23 undefined
24 [value='COMPENG 4TN4']
25
26 [Done] exited with code=0 in 3.387 seconds
```

The screenshot displays the McMaster University Academic Calendars website. The page title is "ACADEMIC CALENDARS". The main content area is titled "Course Listings" and shows a list of courses for the 2022-2023 academic year. The course "COMPENG 4TN4 - Image Processing" is highlighted. The course description includes: "Digital image formation and representation; filtering, enhancement and restoration; edge detection; discrete image transforms; encoding and compression; segmentation; recognition and interpretation; 3D imaging applications. Three lectures, one tutorial, one lab every other week, second term. Prerequisite(s): ELECENG 3TP4 or ELECENG 3TP3, one of ELECENG 3T04, ELECENG 3T05 or 3T06 or permission of the instructor". The right sidebar shows a search bar and a "Filter" button. The bottom of the page shows a "Filter" button and a "Show" button.



YouTube - Search API

```
▼ videos: Array(3)
  ▼ 0:
    etag: "LsC_VGpvYHND00lgmzq4ugcxP4s"
    ▼ id:
      kind: "youtube#video"
      videoId: "8APOcBqbG-U"
      ► [[Prototype]]: Object
      kind: "youtube#searchResult"
    ▼ snippet:
      channelId: "UC0cd_-e49hZpWLH3UIwOWRA"
      channelTitle: "Professor Dave Explains"
      description: "Our bag of tricks for integration is complete! Now it's time to"
      liveBroadcastContent: "none"
      publishTime: "2018-05-17T15:04:16Z"
      publishedAt: "2018-05-17T15:04:16Z"
      ► thumbnails: {default: {...}, medium: {...}, high: {...}}
      title: "Advanced Strategy for Integration in Calculus"
      ► [[Prototype]]: Object
    ► [[Prototype]]: Object
  ► 1: {kind: 'youtube#searchResult', etag: 'OEyV4FRfqK_KBjDm4__0UenR5X8', id: {...}, sr
  ► 2: {kind: 'youtube#searchResult', etag: 'fUMZFSKhSoXbkJ1whdNVhNoeXJg', id: {...}, sr
```

YouTube - Comments API

```
▼ comments: Array(3)
  ▼ 0:
    etag: "1LQRNEFuspAy7UtC6Zc0q6SgxhU"
    ▼ items: Array(46)
      ▼ 0:
        etag: "pqy9_h54TWvTUmAwhwXWvXI7xcw"
        id: "UgwBnQF0NoHoGvKg3054AaABAg"
        kind: "youtube#commentThread"
        ▼ snippet:
          canReply: true
          isPublic: true
          ▼ topLevelComment:
            etag: "8t-_o7spr69QUfYy6mCyXJAIw8I"
            id: "UgwBnQF0NoHoGvKg3054AaABAg"
            kind: "youtube#comment"
            ▶ snippet: {videoId: '8APOcBqG-U', textDisplay: 'cannot thank you enough!! this is super helpful!!! :)',
            ▶ [[Prototype]]: Object
            totalReplyCount: 0
            videoId: "8APOcBqG-U"
            ▶ [[Prototype]]: Object
            ▶ [[Prototype]]: Object
          ▶ 1: {kind: 'youtube#commentThread', etag: 'kSdrTMfL_YjC4ZXHKE-C_DAWy0Q', id: 'UgxrNCzq6Y8Klw09gkR4AaABAg', sni
```

How we built it

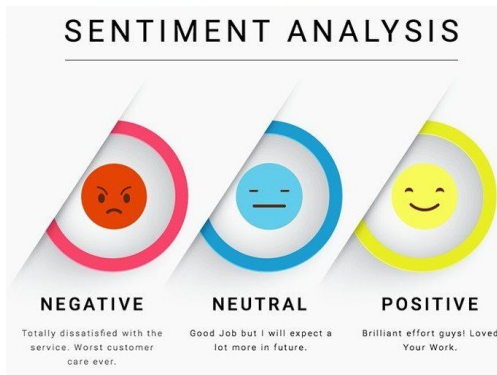


react-youtube TS

10.1.0 • Public • Published 2 months ago

puppeteer TS

19.5.2 • Public • Published 3 days ago



Demo



[Home](#)

[About Us](#)

Make you sure you know everything that is needed to know for your course!

- Acts a refresher to fundamental concepts required for the course
- Presenting topics you need to know for the course by looking at prerequisites
- Information about the course, course ratings, professor ratings, course difficulty

Enter your course code below!



Fetch relevant concepts from course directory



ML sorts the learning videos by most positively reviewed



Displays a score based on their understanding



Challenges

- Learning Javascript and React
- A lot of time was poured into the design iterations and how we would use our tools to deliver an end result that fulfills the challenges
- Trouble with implementing web scraping on McMaster's Course Calendar website
 - The end result was not what we expected when using a variety of javaScript functions, namely Puppeteer, JSDOM, and Axios



Future Improvements

- Fully integrate the web scraping aspects
- Implementing ChatGPT to generate descriptions or summaries for each video for each concept
- Displaying useful information to the student:
 - course details
 - course ratings
 - professor ratings
 - course difficulty

Training ML Model- Sentiment Analysis

Comment	Positive	Negative	Neutral	Compound Sentiment
215 looks like gonna be awesome, the effect, cgi look real, more than other heroes from M, go for it DC	0.374	0	0.626	0.8797 Positive
216 I wish Dwayne Johnson still had hair, Hes the perfect cast for Black Adam looks wise but the lack of hair is a shame.	0.206	0.234	0.56	-0.431 Negative
217 Dope trailer. Can't wait for the movie. Especially cause the rock plays Black Adam.	0.133	0	0.867	0.25 Positive
218 This trailer is a major upgrade and pure awesome. Pierce looks amazing as Fate, and I love how Black Adam catches	0.339	0	0.661	0.9466 Positive
219 Dc coming with full force	0	0	1	0 Neutral
220 Pierce Brosnan is a great actor since my childhood.. he is my 1st James Bond..	0.24	0	0.76	0.6249 Positive
221 This looks absolutely amazing and I'm happy they kept the serious tone. Not everything needs to be a joke like Thor	0.477	0.037	0.486	0.9468 Positive
222 Cinematography, cgi, lighting effects,bgm costumes...All are very cool, with a fresh touch, and looking amazing.	0.449	0	0.551	0.8384 Positive

```
processed_data['Sentiment'].value_counts():
2      205
1       39
0       36
Name: Sentiment, dtype: int64
```

Training ML Model- Gaussian Naives Bayes

100	cant wait to see this way back in early 2000s when dc did the 52 series i mostly read what happened to black adam during 52 and i remember saying to my	2
101	and the icing on the cake hopefully in the end credits we see supes omg that would be amazing lol i cannot wait for this movie	2
102	epic trailer can t wait	1
103	this could spearhead the entire dceu revival looks damn good	2
104	this trailer gave me goosebumps	1
105	its refreshing that dceu is taking this route seriously its a fresh release from having to deal with marvels nonstop comedic approaches to the point that its s	0

```
final_data['Sentiment'].value_counts()  
0      205  
1      205  
2      205  
Name: Sentiment, dtype: int64
```

```
cm:  
[[58  0  0]  
 [ 0 70  0]  
 [10  1 46]]
```

```
Accuracy:  
0.9405405405405406
```

ChatGPT Descriptor

Question: What are some key concepts I need to know about Signals?

Response:

Some key concepts related to signals include:

- Signals are a way of communicating between processes.
- Signals can be used to indicate an error condition, or to initiate a clean shutdown of a process.
- Signals can be blocked, or ignored.
- Signals can be caught by a handler, which can then take appropriate action.

Question: What are some key concepts I need to know about Waves?

Response:

Some key concepts you should know about waves are:

- Waves are disturbances that travel through a medium, such as air or water.
- They are caused by a vibrating object, such as a tuning fork.
- Waves transfer energy from one place to another.
- They can be described by their amplitude (height), wavelength (length), and frequency (number of waves per second).