



TEDx

4all

Compito 3: AWS Lambda Functions

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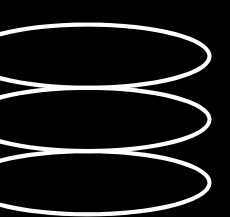



Tecnologie Cloud e Mobile 2024





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PRIMA API - Get_Watch_next_by_Id

Al termine della visione di un talk, TED4all suggerisce all'utente dei video correlati a quello appena guardato, al fine di offrire un'esperienza più coinvolgente sulla base dei suoi interessi

```
connect_to_db().then(() => {
  console.log('=> get_all talks');
  talk.find({_id: body.id})
    .select('related_videos')
    .skip((body.doc_per_page * body.page) - body.doc_per_page)
    .limit(body.doc_per_page)
    .then(talks => {
      callback(null, {
        statusCode: 200,
        body: JSON.stringify(talks)
      })
    })
  )
  .catch(err =>
    callback(null, {
      statusCode: err.statusCode || 500,
      headers: { 'Content-Type': 'text/plain' },
      body: 'Could not fetch the talks.'
    })
  );
});
```

Esempio di elemento nella collection tedx_data

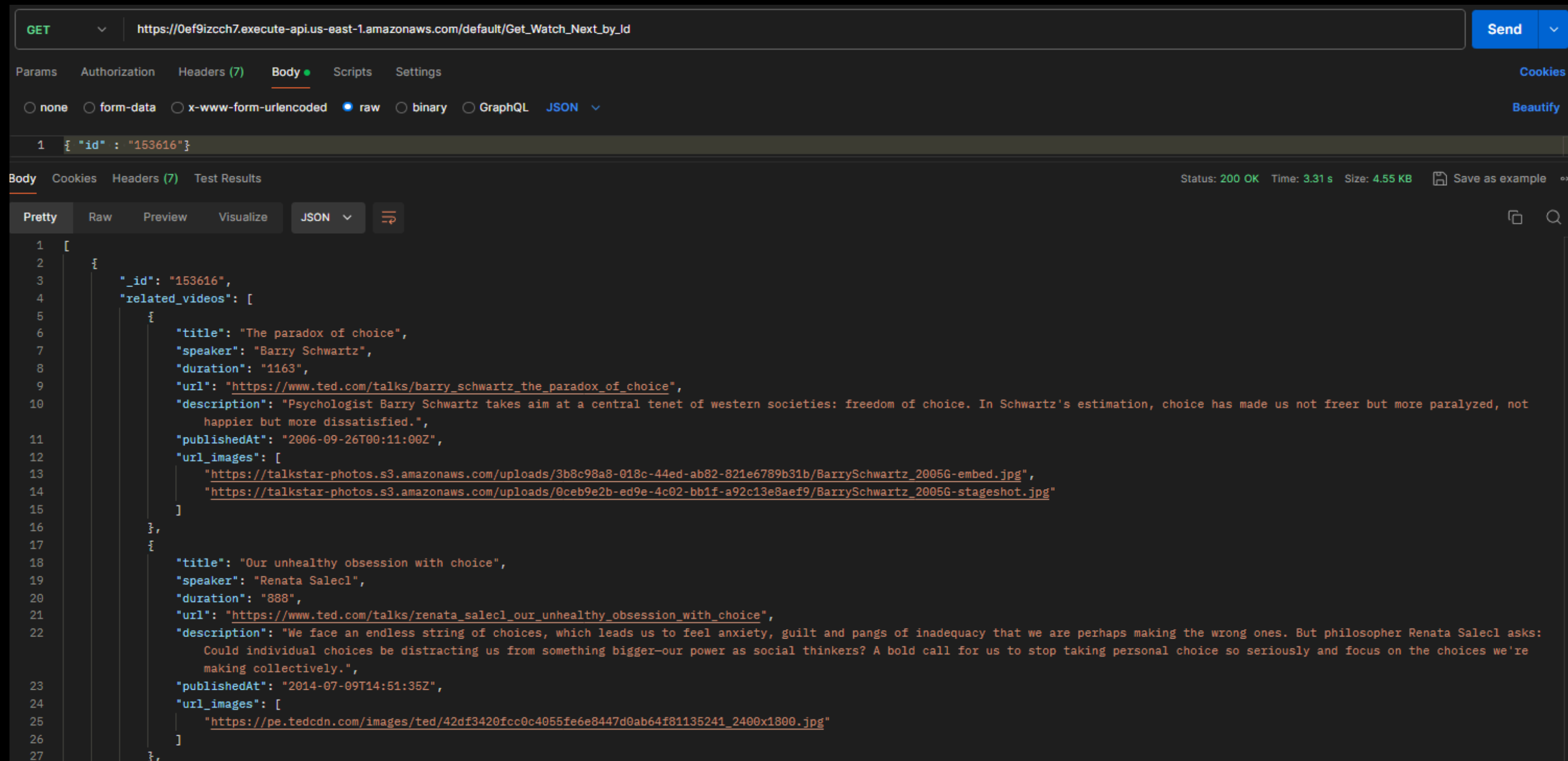
```
{
  _id: "153616"
  slug: "petter_johansson_do_you_really_know_why_you_do_what_you_do"
  speakers: "Petter Johansson"
  title: "Do you really know why you do what you do?"
  url: "https://www.ted.com/talks/petter_johansson_do_you_really_know_why_you_"
  description: "Experimental psychologist Petter Johansson researches choice blindness..."
  duration: "960"
  publishedAt: "2018-03-06T16:00:08Z"
  interalId: "10361"
  url_images: Array (3)
    0: "https://talkstar-photos.s3.amazonaws.com/uploads/b9fa704c-e3a3-4af3-84..."
    1: "https://talkstar-photos.s3.amazonaws.com/uploads/4954b34c-d0cf-4d04-a8..."
    2: "https://talkstar-photos.s3.amazonaws.com/uploads/68a1069d-193a-4c17-a3..."
  tags: Array (7)
    0: "cognitive science"
    1: "psychology"
    2: "illusion"
    3: "decision-making"
    4: "self"
    5: "magic"
    6: "TEDx"
  related_videos: Array (6)
    0: Object
      title: "The paradox of choice"
      speaker: "Barry Schwartz"
      duration: "1163"
      url: "https://www.ted.com/talks/barry_schwartz_the_paradox_of_choice"
      description: "Psychologist Barry Schwartz takes aim at a central tenet of western so..."
      publishedAt: "2006-09-26T00:11:00Z"
      url_images: Array (2)
        0: Object
        1: Object
    1: Object
    2: Object
    3: Object
    4: Object
    5: Object
  }
```

Questa funzionalità è realizzata attraverso la lambda function Get_Watch_next_by_Id che, dato l'ID di un talk, ritorna i watch_next con tutti i relativi dati

RISULTATO API

https://0ef9izcch7.execute-api.us-east-1.amazonaws.com/default/Get_Watch_Next_by_Id

Come appaiono i dati esposti dall'API:



The screenshot displays a REST client interface with the following details:

- Method:** GET
- URL:** https://0ef9izcch7.execute-api.us-east-1.amazonaws.com/default/Get_Watch_Next_by_Id
- Body Tab:** Selected, showing a JSON response.
- JSON Format:** Pretty (indented).
- Status:** 200 OK
- Time:** 3.31 s
- Size:** 4.55 KB

The JSON response is as follows:

```
[
  {
    "_id": "153616",
    "related_videos": [
      {
        "title": "The paradox of choice",
        "speaker": "Barry Schwartz",
        "duration": "1163",
        "url": "https://www.ted.com/talks/barry_schwartz_the_paradox_of_choice",
        "description": "Psychologist Barry Schwartz takes aim at a central tenet of western societies: freedom of choice. In Schwartz's estimation, choice has made us not freer but more paralyzed, not happier but more dissatisfied.",
        "publishedAt": "2006-09-26T00:11:00Z",
        "url_images": [
          "https://talkstar-photos.s3.amazonaws.com/uploads/3b8c98a8-018c-44ed-ab82-821e6789b31b/BarrySchwartz_2005G-embed.jpg",
          "https://talkstar-photos.s3.amazonaws.com/uploads/0ceb9e2b-ed9e-4c02-bb1f-a92c13e8aef9/BarrySchwartz_2005G-stageshot.jpg"
        ]
      },
      {
        "title": "Our unhealthy obsession with choice",
        "speaker": "Renata Salecl",
        "duration": "888",
        "url": "https://www.ted.com/talks/renata_salecl_our_unhealthy_obsession_with_choice",
        "description": "We face an endless string of choices, which leads us to feel anxiety, guilt and pangs of inadequacy that we are perhaps making the wrong ones. But philosopher Renata Salecl asks: Could individual choices be distracting us from something bigger—our power as social thinkers? A bold call for us to stop taking personal choice so seriously and focus on the choices we're making collectively.",
        "publishedAt": "2014-07-09T14:51:35Z",
        "url_images": [
          "https://pe.tedcdn.com/images/ted/42df3420fcc0c4055fe6e8447d0ab64f81135241_2400x1800.jpg"
        ]
      }
    ]
  }
]
```


SECONDA API - Get_Transcript_by_Id

L'applicazione, oltre alla traduzione audio, fornisce sottotitoli multilingue per consentire agli utenti di seguire i talk nella lingua da loro preferita

Esempio di elemento nella collection

```
connect_to_db().then(() => {
  console.log('=> get_all talks');
  talk.find({_id: body.id})
    .select('transcript')
    .skip((body.doc_per_page * body.page) - body.doc_per_page)
    .limit(body.doc_per_page)
    .then(talks => {
      callback(null, {
        statusCode: 200,
        body: JSON.stringify(talks)
      })
    })
  )
  .catch(err =>
    callback(null, {
      statusCode: err.statusCode || 500,
      headers: { 'Content-Type': 'text/plain' },
      body: 'Could not fetch the talks.'
    })
  );
});
```

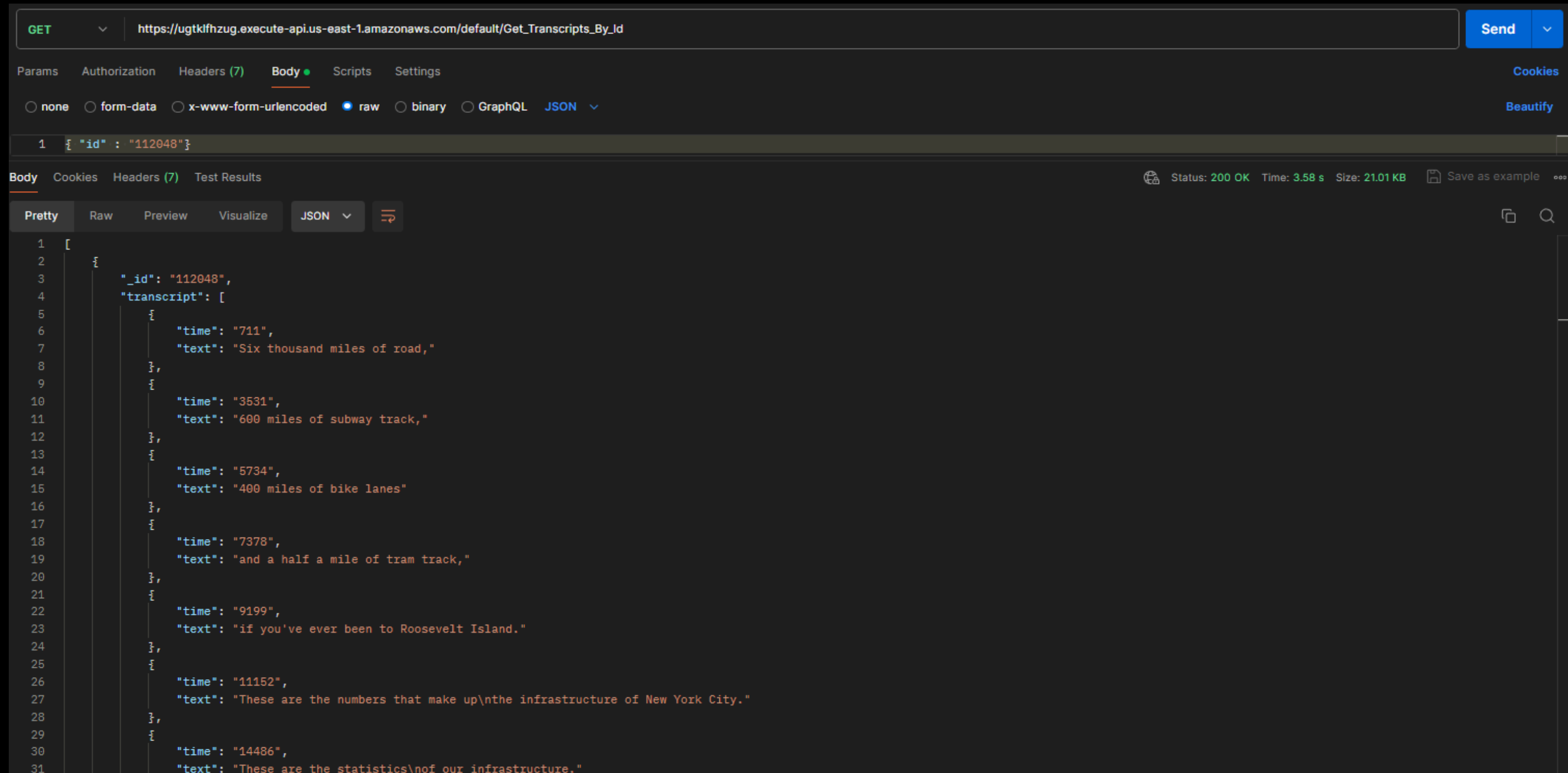
```
{
  _id: "112048"
  slug: "ben_wellington_how_we_found_the_worst_place_to_park_in_new_york_city_u..."
  speakers: "Ben Wellington"
  title: "How we found the worst place to park in New York City -- using big dat..."
  url: "https://www.ted.com/talks/ben_wellington_how_we_found_the_worst_place_..."
  description: "City agencies have access to a wealth of data and statistics reflectin..."
  duration: "698"
  publishedAt: "2015-02-26T15:58:03Z"
  interalId: "2199"
  url_images: Array (2)
  tags: Array (7)
  transcript: Array (272)
    0: Object
      time: "711"
      text: "Six thousand miles of road,"
    1: Object
      time: "3531"
      text: "600 miles of subway track,"
    2: Object
      time: "5734"
      text: "400 miles of bike lanes"
    3: Object
      time: "7378"
      text: "and a half a mile of tram track,"
    4: Object
      time: "9199"
      text: "if you've ever been to Roosevelt Island."
    5: Object
    6: Object
    7: Object
    8: Object
    9: Object
    10: Object
  }
```

Questa funzionalità è realizzata mediante la lambda function Get_Transcript_by_Id che, dato l'ID di un video, ritorna la trascrizione dello stesso (timestamp e frase pronunciata dallo speaker)

RISULTATO API

https://ugtklfhzug.execute-api.us-east-1.amazonaws.com/default/Get_Transcripts_By_Id

Come appaiono i dati esposti dall'API:



The screenshot displays a REST client interface with the following details:

- Method:** GET
- URL:** https://ugtklfhzug.execute-api.us-east-1.amazonaws.com/default/Get_Transcripts_By_Id
- Body Tab:** Selected, showing the response body in JSON format.
- Request Body:**

```
{ "id" : "112048" }
```
- Response Status:** 200 OK, Time: 3.58 s, Size: 21.01 KB
- Response Body (JSON):**

```
[
  {
    "_id": "112048",
    "transcript": [
      {
        "time": "711",
        "text": "Six thousand miles of road,"
      },
      {
        "time": "3531",
        "text": "600 miles of subway track,"
      },
      {
        "time": "5734",
        "text": "400 miles of bike lanes"
      },
      {
        "time": "7378",
        "text": "and a half a mile of tram track,"
      },
      {
        "time": "9199",
        "text": "if you've ever been to Roosevelt Island."
      },
      {
        "time": "11152",
        "text": "These are the numbers that make up\nthe infrastructure of New York City."
      },
      {
        "time": "14486",
        "text": "These are the statistics\nof our infrastructure."
      }
    ]
  }
]
```

CRITICITÀ E SVILUPPI FUTURI

Nel processo di raccomandazione dei video agli utenti, esiste la possibilità di proporre talk già visualizzati. Per prevenire che ciò accada, è possibile monitorare e registrare nel database i video che ciascun utente ha già guardato.

I timestamp potrebbero non essere perfettamente sincronizzati con l'audio o il video, causando disallineamenti tra il contenuto visualizzato e il testo proposto. Un miglioramento potrebbe verificarsi includendo l'utilizzo di algoritmi di intelligenza artificiale per migliorare l'analisi del contenuto e fornire trascrizioni più accurate e contestuali.

Inoltre potrebbe risultare utile implementare funzionalità interattive come la ricerca di parole chiave specifiche all'interno delle trascrizioni e la navigazione interattiva nel video basata sui timestamp.



TED4all

Ponte tra culture e lingue



[Trello Board](#)



[GitHub Repository](#)

