



# Tecnológico de Monterrey

## TC3007C Inteligencia artificial avanzada para la ciencia de datos

### Grupo 503

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El objetivo de este proyecto, fue el implementar un programa que fuera capaz de leer archivos de audio, transcribirlos en texto y finalmente generar un resumen, esto para probar que soy capaz de implementar programas para el procesamiento de lenguaje natural en sus diversas formas utilizando las herramientas que son ampliamente utilizadas a día de hoy.

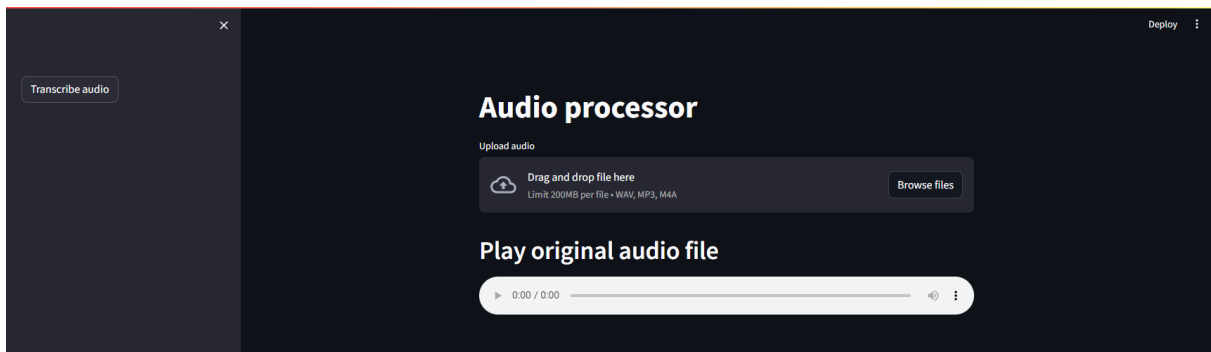
Este proyecto muestra que soy capaz de utilizar múltiples herramientas dentro del lenguaje python, el primero es streamlit, una librería que me sirvió para crear una aplicación web de manera local de manera simple y rápida, al mismo tiempo que manteniendo una buena estética. La segunda sería la librería whisper, la cual cuenta con diferentes modelos, usando el modelo base para la transcripción de un audio a un texto rápidamente. Por último pero no menos importante está openai para la utilización de del chat gpt, lo cual nos permitirá el poder realizar resúmenes de las transcripciones.

En cuanto al programa que cree, traté de hacerlo corto, utilizando parte del código de las diapositivas vistas en clases, además de investigar en internet en la documentación y foros de openai, por lo que es fácil apreciar lo que está haciendo el código en el siguiente orden:

Añadir título a la página, añadir un botón para la carga de el archivo de audio a una variable, carga del modelo de transcripción, guardar la llave para el uso de la api de chat gpt, crear la función para mostrar el texto resumido, añadir la parte lateral de la aplicación web, la cual tiene adentro el botón para comenzar la transcripción y las funciones tanto para realizar la transcripción como para resumir dicho texto, regresando a la página principal se encontrará un botón para mostrar el resumen generado y un lector de audio que estará siempre en la página.

Estos conocimientos adquiridos pueden resultar muy útiles para la creación de aplicaciones web que requieran algún tipo de bot, ya que incluso si no fuera utilizado por medio de audio aún se podría reciclar parte del código realizado dependiendo de la situación en la que me encuentre.

## Comienzo de aplicación web



## Transcripción realizada

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Transcribe audio

Transcribing audio

Transcription complete

Deploy

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# Audio processor

Upload audio

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Limit 200MB per file • WAV, MP3, M4A

Browse files

📎

audioSample.mp3 24.1MB

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For the last time, he checked his own pack, the pack on his horse, his horse, and even his armor and sword. Everything was ready, but him. You will be just fine, my dear, his wife cooded to him, kissing him gently on his lips. Don't worry about it, it'll all turn out just fine and you will get the answer if you have been searching for. He smouted her and kissed her back deeply. She tasted faintly of cherries and he knew that he would miss her the most. He turned and padded his horse. The horse was a fine beast, large, black and accidentally trained. The second finest from their stable. His wife had the finest, though he had not yet told her so. He probably never would. As the knowledge of this made him feel good and he did not want her to feel bad about it. He checked his sword, clicked a stirrup in and swung onto his horse. He took the reins firmly before turning back to look at her one last time. When I returned from my quest, my love, he said, blowing her a kiss. I will know. I love you and will love you even more by then. The original rations had finished and the quink-caughted countryside had long since been left behind. He had overnighted in a couple of dirty ends and small villages and paid by coin. But mostly, he had slept in barns in the common rooms of farms along the way and paid poor peasants with tales of his knighthood in news from the other towns. Eventually, these farms had run out and he had to find soft grassy fields to sleep in under the twinkling stars. And then, eventually, the soft grassy fields had run out too. The countryside had gotten wilder, the bushes thicker and the shadows darker. The knights still displayed the bejeweled cosmos overhead but soft rustles, strange hows and even stranger, more scary sounds, not penetrated the darkest hours. He missed his wife and thoughts of her alone kept him going and got him through those knights. She would appear in his dreams, lying beside him. He would hold her as she kissed his cheek gently before awakening at first light beside his horse. His one hand absolutely petting her in the other around his sword handle. And then he left the countryside altogether as the land sloped upwards. At first, the slope was slow, but soon he was climbing cliffs by his fingernails. He had to leave his horse behind. He had taken off all her straps and watched as she tried it back the way they came. He hoped she reached somewhere safe and someone took good care of her. Perhaps she would even make it back to their staples and his wife. The thought had almost made him cry, but hours later hanging by his fingernails would certain death far below him. The feeling was expunged from his mind. He had a quest and it was bigger than him. The wind was icy and unforgiving to top the mountain. It cut through his clothing and chill to the bone while it howled by him, screaming in his ear. In fact, he was sure he could actually hear it howling. Faintly but audibly, he was sure that he could hear the screams of things unnamable on that wind. Perhaps it was the ice demons that haunted these peaks or even the darker things that hid in the cracks and shadows of this world. Perhaps it came from outer space as the sky at this height no longer held day or night, but only a purplish hue akin to twilight. He gritted his teeth, warmed only by the thought of his wife, and plotted on and up the highest peak that held the entrance to the deepest dungeon. As he descended into the gaping maw of the dungeon, the howling oblivion of the wind receded and was replaced by a cold, creeping darkness. This ancient dungeon had been cut into the solid rock in another age before the land was broken asunder in the mountain raised it up high. But it remained a dungeon and lay unbroken with old magic rot into its cold iron cells that still held its original prisoners.

Transcribe audio

Transcribing audio

Transcription complete

quieter, the darkness built around him as he inch cautiously deeper into the dungeon. The sputtering torch he held cast flickering haunting shadows around him, while its small light barely penetrated the ancient darkness held within those old tunnels. He passed by iron door at the iron door. Most held silence behind them, some rattling with howls, grouse or babbling, in one which he stopped at before gritting his teeth and forcing himself forward, had a soft, beautiful sinking in some ancient sad language. The ethereal song made him think of his wife and his heart ached to hold her again and kiss her again and tell her how much he loved her. He passed by so many ancient iron doors, but not a single one was open, whoever had built this dungeon had intended it to last as a prison for eternity. And then, right at the bottom of the dungeon, amongst the very roots of that mountain, he reached a final twisted iron door with warped forgotten rooms covering its vast, bleak and impenetrable surface. He paused, unsure what to do when a soft, rustling voice spoke up from the other side of it. Good night, you have traveled far to ask me a question, but before you do so, you must know what the price of the answer is. I will answer you truthfully in and full, but only if you promise me one single act. At some time in the future, I will ask of you to do something for me. Good night, and you will not refuse. The soft, rustling voice on the other side of the door fell quiet. It felt expected, while the darkness and brooding silence of that place suddenly felt like it was pressing down on him. I will only agree to this, he spoke up. His voice shaking slightly, but he forced out the words, if the act that you ask of me does not breach my honor. If you agree to this, then we have a deal. Once again, there was a silence from the other side of the iron door, but then, softly, like rustling leaves down a midnight path, the voice said a single word. Yes, right, he said feeling more confident, then I want to know what my purpose in life is. If I have one single important task to perform, that will garner the most good in this world, then what is it? There was a sound like the cold wind through a dying orchard, and he realized that the voice on the other side of the iron door was laughing quietly. The hair on the back of his neck rose, and he forced down the black, bitter primal fear, swelling up in his stomach. Your purpose, good night, the voice whispered almost gleefully, is to love your wife, she will bear you three sons, and their descendants will make the world a better place. He felt stunned, no grand quests, no perilous charges, no dragons to slay or maidens to save, just love the person that he already loved with all his heart. He had left his purpose back home, and his heart ached to see again, to hold her, and to kiss her cherry lips in whisper of his love and her ear. But the voice did not stop speaking. Now, good night, the single tasks that are required from you will not break your precious coat of honor. Right now, your trusty steed is trotting back to your old estate, where your wife will find it, intent to it, at first, hopefully, but eventually, assuming the worst. What do you mean? He said, starting at the thought, a sinking feeling growing in the pit of his stomach. What do you wish of me? What is the act that you ask of me? For my payment, I wish of you this single act. The voice rose, it's rustling becoming gleeful and wicked. Good night, you are never to return home to your wife. She pulled the cloak tighter around her and suppressed a shiver. This time of year the northern wind blew down from the farm mountains, carrying its cold across the land. The leaves in their orchard were turning all shades of the sunset as the days were shorter and the nights longer. In there, amidst the warm hues of the orchard, her husband's trusty steed came trotting back onto their property. Her heart rose at the sight and then fell as she was struck by the realization that her husband was not on the horse. Choking back at her, she rushed out to the beast. At that moment, a great gust of the northern wind blew through the orchard. Its icy touch said the leaves rustling incessantly and she could swear. It sounded almost like someone was quietly laughing at her.

Show summarize

## Play original audio file

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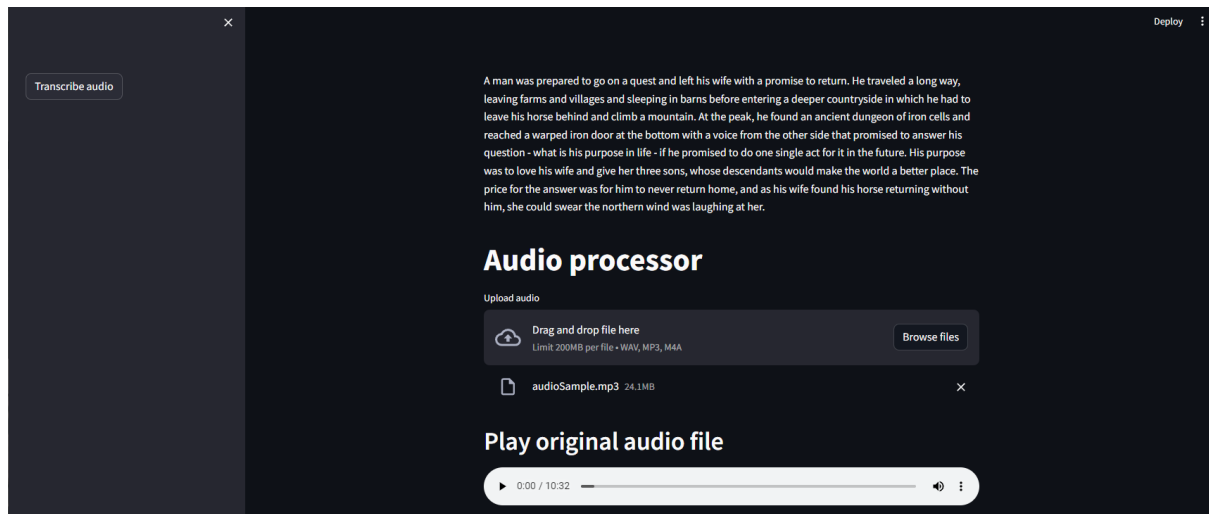
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## Resumen realizado



Anexo:

[https://github.com/Mrjojosa/NLP\\_G503](https://github.com/Mrjojosa/NLP_G503)