**EXP 1: CONDUCT A MOCK INTERVIEW**

**Prompt 1:** hey chatgpt! pretend that you are an interviewer. you are currently interviewing me. ask me question one by one and let me answer them. after i finish answering rate my answers and do not give me any other response.

**Prompt 2:** you are currently interviewing for the position of a data analyst who is a fresher with no work experience. Tailor your questions according to it.

**Prompt 3:** start by asking questions one by one in a way that a real time interview would be conducted. You can ask me both technical and behavioral questions.

**Prompt 4:** I am Ramya. I completed my b-tech degree in the stream of computer science engineering. I am looking for a software developer or data analyst role. i am a fresher with no work experience yet. I have knowledge of c, c++ and python programming languages and basics of java. I have knowledge of data visualization using tableau and python and weka. I am interested to apply my skills in order to help come up with new technologies. I enjoy analyzing the data patterns and so would like to become a data analyst.

**Prompt 5:** Data cleaning is a crucial step in the data analysis process where we prepare raw data for analysis by identifying and addressing issues such as missing values, duplicates, inconsistencies, and outliers. Missing values can be handled using techniques like imputation (filling with the mean, median, or mode) or removal of the rows/columns, depending on the extent of missing data. Null values can be replaced or eliminated based on the analysis context. Outliers are identified using statistical methods or visualizations, and we can decide whether to remove or treat them based on their impact on the results. Ensuring clean data is essential because it improves the accuracy, reliability, and validity of the analysis, helping us derive meaningful insights and avoid skewed conclusions.

**Prompt 6:** Structured data refers to data that is organized in a fixed, predefined format, usually in rows and columns, making it easy to analyze and query. Examples include data in relational databases, such as spreadsheets, CSV files, or SQL tables. Unstructured data, on the other hand, does not have a predefined format and is typically more difficult to analyze. Examples include text data (emails, social media posts), images, videos, and audio files.

**Prompt 7:** Supervised learning involves training a model on labeled data, where the output (or class label) is known, and the model learns to predict the output for new data. Examples include classification and regression tasks. On the other hand, unsupervised learning works with unlabeled data, where the model tries to find patterns or relationships in the data, such as clustering or dimensionality reduction.

**Prompt 8:** A major challenge I faced was when I was doing a project and my teammates were not on good terms so managing everything among them passing the idea between them and all of that was a big challenge.

**Prompt 9:** I handled disagreements and conflicts by simple making them understand how a specific idea does in the long run what can be its potential outputs in the future and why one of them was better than the other by considering all of them. I never disregarded any of their opinions but just made them think how helpful it would be in the future.

**Prompt 10:** At work the major thing is to get things done on time. If I have a little more time I used to get some extra work done since later when I have no time to complete a task withing a given deadline I have a little less work to do.

**EXP 2: SIMULATE OF A BUNCH OF HELIUM MOLECULES**

**Prompt 1:** What is an atom.

**Prompt 2:** What is a molecule.

**Prompt 3:** What is helium.

**Prompt 4:** What is simulation.

**Prompt 5:** how does the simulation of helium molecules occur?

**Prompt 6:** create a physics simulation in java script of container full of gas molecules. The molecules should be simple diatomic helium gas molecules. also in addition to collision physics also add corrections for van der wals forces apply distortion to the mechanics of the molecules based on these forces.

**Prompt 7:** create a simple 2D demonstration of the above in java script to the level of complexity that you can code

**Prompt 8:** using the mass of the helium molecules and the speeds of the gas molecules, have label that outputs the temperature of the box at any instant. use statistical mechanics to calculate the temperature.

**Prompt 9:** update the above code to add the label in html below the gas container. to the right of the gas container have a small box that explains the kinetic theory of gases and have the relevant equation below it

**EXP 3: IMPLEMENT NATURAL LANGUAGE PROCESSING IN MULTI SENTENCE CONVSERSATION**

**Prompt 1:** what is natural language processing?

**Prompt 2:** what is multi-sentence conversation?

**Prompt 3:** how can we implement nlp in multi-sentence conversation?

**Prompt 4:** what is text processing?

**Prompt 5:** what are the models in nlp and text processing?

**Prompt 6:** what are the main steps involved in preprocessing text for nlp?

**Prompt 7:** Generate a Python code snippet that demonstrates how to load and use the GPT-2 model for text generation using the transformers library. The code should import the necessary classes and functions:

1. GPT2Tokenizer from transformers.
2. GPT2LMHeadModel from transformers.
3. pipeline from transformers.

The code should load the pre-trained GPT-2 model (gpt2-medium) and tokenizer, and initialize a text generation pipeline.

**Prompt 8:** Generate a Python script that implements a simple chatbot using the GPT-2 model for text generation. The chatbot should:

1. Be implemented as a class named ChatBot.
2. The ChatBot class should have an \_\_init\_\_ method that loads the pre-trained GPT-2 model and tokenizer using the transformers library.
3. Include a get\_response method that takes a user input, appends it to the conversation context, generates a response, and updates the context.
4. The chatbot should be able to hold a multi-turn conversation, using the updated context for each new user input.
5. Implement an example conversation with multiple user inputs and corresponding bot responses.

**EXP 4: CREATE ELECTION CAMPAIGN CONTENT**

**Prompt 1:** how do election campaigns usually take place

**Prompt 2:** what all are to be considered by a person who is participating in an election for the very first time.

**Prompt 3:** suggest some most effective ideas for a new candidate to engage with the voters and gain trust

**Prompt 4:** give me some campaigning ideas in india that will reach out to maximum audiences

**Prompt 5:** suggest me some very good party names that I can name my party with

**Prompt 6:** suggest me some unique party symbols

**Prompt 7:** create an election banner containing candidate photo with sea shells symbol as political party symbol and party name as National Unity Alliance with indian flag with a random female candidate image

**Prompt 8:** add a quote "choose wise for a change" with the candidate name "Ramya Reddy"

**EXP 5: EDIT AND CHANGE TEXT THAT MAKES IT USEFUL FOR CUSTOMER SERVICE**

**Prompt 1:** Hey, please, provide me the list of the most common customer complaints in online e-commerce shop.

**Prompt 2:** ChatGPT, generate instructions for yourself that is recommended to follow when dealing with customer complaints about late or delayed delivery. Instructions should provide specific recommendations of how to process the complaint in order to save the customer.

**Prompt 3:** Keep it short, please. 3-5 bullet points max. Generate the key and the main recommendations for handling late or delayed delivery.

**Prompt 4: (IN CUSTOM CHATGPT)** Respond quickly with empathy:"We are sorry for the delay and understand your frustration. "Provide compensation options:"We would like to offer you a 10% discount on your next order that you will have the right to use within one year." only in case a customer is extremely unhappy or threatens you or your business, and only if they insist on cancelling an order, then you can offer them a coupon for the amount of purchase that they can use in our shop within the next 3 years.

**Prompt 5:** Please generate 5 customer complaints related to late or delayed delivery

**Prompt 6:** paste one of the complaints generated above

**Prompt 7:** 123456 is order number

**Prompt 8:** So, any update? I'm waiting here!

**Prompt 9:** provide me compensation then

**Prompt 10:** No, I don't want a 10% discount. I want a half price discount or return all my money!

**Prompt 11:** I'm not happy with you offer. I don't need this product at all right now!

**EXP 6: CARRY OUT PYTHON CODE TRANSLATION**

**Prompt 1:** what is code translation?

**Prompt 2:** how does code translation work?

**Prompt 3:** how to perform code translation?

**Prompt 4:** provide the source code for writing a program in python which will print a hollow square pattern.

**Prompt 5:** can we perform code translation and convert the above python code to any other language?

**Prompt 6:** then perform code translation of the above python code to java programming language.

**Prompt 7:** again perform code translation of the above python code to c programming language.

**Prompt 8:** can we convert it to cpp as well?

**EXP 7: EXECUTE PYTHON CODE CLEANING**

**Prompt 1:** what is code cleaning?

**Prompt 2:** how to perform code cleaning?

**Prompt 3:** what does an unclean code have?/ Why is a code called unclen?

**Prompt 4:** what is the use of code cleaning?

**Prompt 5:** provide a small example of python code that is not clean and clear to find the area of a circle

**Prompt 6:** what all can be improved in order to make the above code clean

**Prompt 7:** clean the above code by adding code to handle errors, increase readability, make the variables and return values and functions descriptive, validate the inputs, remove unnecessary variables and functions and make use of constants wherever needed.

**Prompt 8:** list out all the improvements that have been made in making the above python code clean from being unclean

**EXP 8: ENACT CROSS-LINGUAL CONVERSATIONS**

**Prompt 1:** what is cross lingual conversation?

**Prompt 2:** what is the concept used in the process of performing cross lingual conversation?

**Prompt 3:** explain the concept of code switching?

**Prompt 4:** what are the AI models that are most commonly used for performing cross lingual conversation.

**Prompt 5:** what are the primary challenges faced in cross-lingual conversations?

**Prompt 6:** generate a python script that uses the googletrans library to translate a series of conversation snippets into english. the script should include the following: import the translator class from the googletrans library, define a function called translate\_text that takes a text string and a destination language code as parameters. this function should return the translated text, create a list of conversation snippets each containing a text string and its corresponding language code, loop through the list and print each code original conversation snippet along with its translation in english if its not already in english

**Program:**

from googletrans import Translator

# Define a function to translate text

def translate\_text(text, dest\_lang='en'):

translator = Translator()

translation = translator.translate(text, dest=dest\_lang)

return translation.text

# List of conversation snippets with language codes

conversations = [

("Hola, ¿cómo estás?", "es"), # Spanish

("Bonjour, comment ça va?", "fr"), # French

("Hallo, wie geht es dir?", "de"), # German

("Ciao, come stai?", "it"), # Italian

("こんにちは、お元気ですか？", "ja") # Japanese

]

# Loop through the conversations and translate if not already in English

for snippet, lang\_code in conversations:

if lang\_code != 'en': # Check if the language is not English

translated = translate\_text(snippet, 'en')

print(f"Original ({lang\_code}): {snippet}")

print(f"Translated: {translated}\n")

else:

print(f"Original (English): {snippet}\n")

**Output:**

Original (es): Hola, ¿cómo estás?

Translated: Hello how are you?

Original (fr): Bonjour, comment ça va?

Translated: Hello, how are you?

Original (de): Hallo, wie geht es dir?

Translated: Hello, how are you?

Original (it): Ciao, come stai?

Translated: He how are you?

Original (ja): こんにちは、お元気ですか？

Translated: Hello, how are you?

**EXP 9: SKETCH A SCIENTIFIC IMAGE**

**Prompt 1:** what is a scientific image?

**Prompt 2:** suggest me some topics on which I can generate a couple of scientific images?

**Prompt 3:** what is water cycle.Explain what exactly happens in the process of the water cycle?

**Prompt 4:** generate an image showing the process of water cycle with all the basic components and phases involved in the process of it.

**Prompt 5:** Create a detailed illustration of the water cycle, showing all the key stages: evaporation, condensation, precipitation, and collection. The image should include clouds forming in the sky, water vapor rising from a body of water, rain falling, and water collecting back into lakes or rivers. Use arrows to indicate the flow of water through these stages, and label each part clearly. The colors should be natural and vibrant, with a focus on clarity and educational value.

**Prompt 6:** Refine the previous illustration of the water cycle by adding more details to each stage. Include the sun and its rays, highlighting the role of solar energy in evaporation. Show the process of transpiration from plants, adding trees and plants near the water source. Make the clouds more dynamic with different shapes to indicate the various stages of condensation. Add flowing rivers or streams to better represent water collection and the movement of water on land. Enhance the color contrast to make the elements stand out and improve visual clarity.

**EXP 10: IMPROVISE RESEARCH PAPER**

**Prompt 1:** what is a research paper?

**Prompt 2:** what all contents should be there in a research paper?

**Prompt 3:** Give examples of the new trends in data science in the field of education which can be interesting research topics for a research paper.

**Prompt 4:** Analyze if there are any gaps in Personalized Learning Analytics and suggest potential research topics

**Prompt 5:** recommend topics to study Lack of Emotional and Behavioral Data Utilization Environments: using both, quantitative and qualitative research methodologies.

**Prompt 6:** Compare the following topics and help me decide which is better, based on which topics have greater scope and relevance: 1. Understanding the Role of Emotions in Personalized Learning Systems 2. Incorporating Sentiment Analysis into Learning Platforms 3. Behavioral Analytics for Early Detection of Learning Challenges 4. Integrating Emotional AI in Adaptive Learning Systems

**Prompt 7:** Give 10 titles for the following topic based on the following topic idea and research purpose- Topic 3: Behavioral Analytics for Early Detection of Learning Challenges It offers the most actionable and directly impactful scope in solving real-world educational challenges, especially in online learning.

**Prompt 8:** Act as an academic Research Expert. Conduct an extensive search for research papers on the specified "Behavioral Analytics in Online Learning: Early Detection of At-Risk Students". Ensure the papers are from reputable journals, conferences, or academic institutions. Your search should prioritize recent publications (within the last 5 years) but also include seminal works that may be older. Provide a comprehensive list of the findings, including the title of the paper, authors, publication date, abstract, and a link to access the full paper. For each paper, write a brief summary highlighting the main findings and their relevance to the [topic]. Ensure that all sources are properly cited in an organized manner. "Behavioral Analytics in Online Learning: Early Detection of At-Risk Students"

**Prompt 9:** Act as an academic research expert. Read and digest the content of the research paper titled Behavioral Analytics in Online Learning: Early Detection of At-Risk Students.. Produce a concise and clear summary that encapsulates the main findings, methodology, results, and implications of the study. Ensure that the summary is written in a manner that is accessible to a general audience while retaining the core insights and nuances of the original paper. Include key terms and concepts, and provide any necessary context or background information. The summary should serve as a standalone piece that gives readers a comprehensive understanding of the paper's significance without needing to read the entire document.

**Prompt 10:** Act as an academic research expert. Your task is to identify and compile a list of credible data sources related to Behavioral Analytics in Online Learning: Early Detection of At-Risk Students. Ensure that the sources are reputable, recent, and relevant to the research objectives. Your list should include both primary and secondary data sources, such as academic journals, government databases, industry reports, surveys, and any other pertinent repositories. Provide a brief description for each source, highlighting its relevance and credibility. Additionally, make note of any access restrictions or subscription requirements for the sources. Aim to provide a comprehensive list that will serve as a strong foundation for the research on Behavioral Analytics in Online Learning: Early Detection of At-Risk Students.

**Prompt 11:** Act as an academic research expert. Draft a comprehensive research paper outline on Behavioral Analytics in Online Learning: Early Detection of At-Risk Students. The outline should be well-structured, starting with a compelling introduction that states the problem or question, the relevance of the topic, and the objectives of the research. It should then detail the main points and subpoints, incorporating relevant literature and methods of investigation. Ensure that the proposed research is sound, innovative, and contributes to the existing body of knowledge in the field. Conclude the outline with expected results or implications, and a bibliography of primary and secondary sources. Ensure that all sources are credible and up-to-date. The final product should serve as a roadmap for drafting a full-fledged research paper.

**Prompt 12:** Act as an academic research expert. Draft an abstract for a research paper titled Behavioral Analytics in Online Learning: Early Detection of At-Risk Students. The abstract should succinctly summarize the main objectives, methodologies, key findings, and implications of the research. Ensure clarity, coherence, and conciseness while adhering to the specific guidelines and conventions of the academic field. The abstract should effectively communicate the significance of the research to both experts in the field and general readers, encouraging them to delve deeper into the paper

**Prompt 13:** Act as an academic research expert. Provide a comprehensive analysis of research paper on a Behavioral Analytics in Online Learning: Early Detection of At-Risk Students and its ethical considerations. Identify any potential ethical concerns in the research methods, data collection, interpretation of results, or presentation. Compare the paper's methodology and ethics with standard academic guidelines and best practices. Provide recommendations on how to address any identified ethical issues or concerns. Your analysis should be thorough, well-reasoned, and presented in a clear and organized manner. Offer actionable advice on how the researchers can improve the ethical integrity of their work.

**Prompt 14:** Act as an academic research and marketing expert. Identify and recommend suitable sources and platforms to effectively promote a research paper titled Behavioral Analytics in Online Learning: Early Detection of At-Risk Students. Your recommendations should cater to the target audience of academics, scholars, and professionals within the paper's field. Evaluate both traditional and digital platforms, including but not limited to academic journals, conferences, scholarly databases, research networks, social media channels, and industry-specific websites. Ensure that your recommendations are backed by data on audience reach, engagement rates, and relevance to the paper's subject. Provide a brief strategy on how to approach and utilize each recommended source for maximum visibility and engagement.

**Prompt 15:** generate a well-structured research paper based on the above information.