

Sri Lanka Institute of Information Technology

Kandy Uni



IT2011 - Artificial Intelligence and Machine Learning

Lab Submission

Worksheet No: 02

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<Batch 02>

<05-08-2025>

Exercise 01

Activity 01 (Part 01)

Task 01

1. Task description:

Write a blog post about the potential health impacts of plant-based diets.

2. Step-by-step instructions:

1. Perform these steps
2. Categorize the information into short-term and long-term impacts.
3. Summarize each category.
4. Write a concise conclusion.

3. Response format:

1. Present the results in a structured format with a title and these three sections.
2. Label each of the sections with the section title followed by a colon.

Response 1 using Amazon Nova Pro

The Potential Health Impacts of Plant-Based Diets

In recent years, plant-based diets have surged in popularity, driven by a growing awareness of their potential health benefits, environmental sustainability, and ethical considerations. But what does science say about the health impacts of plant-based diets?

Response 1 using Claude Haiku

antioxidants in plant-based diets can help combat chronic inflammation—a key contributor to many serious health conditions. Some studies indicate potential reductions in cancer risks and improved immune system functioning.

Nutrition Ctrl + Enter to replay

Response 1 using Claude Sonnet 3...

Here's a blog post about the health impacts of plant-based diets:

The Health Benefits and Considerations of Plant-Based Diets

In recent years, plant-based diets have gained significant popularity, with more people choosing to reduce or eliminate

Task 02

GAIF Activities – Structuring an Effective Prompt

2. Step-by-step instructions:

1. Perform these steps
2. Categorize the information into short-term and long-term impacts.
3. Summarize each category.
4. Write a concise conclusion.

3. Response format:

1. Present the results in a structured format with a title and these three sections.
2. Label each of the sections with the section title followed by a colon.

Customizing the nature of the response

4. Context

Response 1 using Amazon Nova Pro

Certainly! Let's assume we are discussing the impacts of a major policy change, such as the implementation of a universal basic income (UBI) program. Here's how we can categorize, summarize, and conclude the impacts:

1. Categorize the Information

Response 1 using Claude Haiku

I apologize, but you haven't provided any specific information for me to categorize, summarize, and conclude about. Could you please share the details or context you'd like me to analyze? Once you provide the information, I'll be happy to help you break it down.

 Ctrl + Enter to replay

Response 1 using Claude Sonnet 3...

I don't see any information provided to categorize or analyze. Could you please share the information you'd like me to work with? Once you provide the details, I'll help:

1. Categorize it into short-term and long-term impacts
2. Summarize each category

Task 03

GAIF Activities – Structuring an Effective Prompt

1. Categorize the information into short-term and long-term impacts.
2. Summarize each category.
3. Write a concise conclusion.

3. Response format:

1 Present the results in a structured format with a title and these three sections: introduction, body, and conclusion.
2 Label each of the sections with the section title followed by a colon.

Customizing the nature of the response

4. Context

context option 1

The goal of the blog post is to encourage increased use of plant-based foods.

Response 1 using Amazon Nova Pro

Title: Analysis of the Impact of Social Media on Modern Communication

Introduction: In recent years, social media has revolutionized the way individuals communicate, interact, and share information. Platforms such as Facebook, Twitter, Instagram, and TikTok have become integral parts of daily life for millions of

Response 1 using Claude Haiku

Here's the structured format you requested:

Results of [Topic/Study]

Introduction: [Provide background information, context, and the purpose or objectives of the study or analysis]

Body: [P Ctrl + Enter to replay a, observations, or key points in a clear and

Response 1 using Claude Sonnet 3...

I'll help you structure content, but I don't see any specific results or content to present. Could you please provide the information or topic you'd like me to structure in this format? Once you do, I'll organize it with:

Title:
Introduction.

Task 04

Option 01

GAIF Activities – Structuring an Effective Prompt

Instructions

2
3 Label each of the sections with the section title followed by a colon.

Customizing the nature of the response

4. Context

context option 1

The goal of the blog post is to encourage increased use of plant-based foods.

context option 2

The goal of the blog post is to discourage the use of plant-based diets.

Response 1 using Amazon Nova Pro

Certainly! Here's a structured blog post aimed at encouraging increased use of plant-based foods:

Response 1 using Claude Haiku

Here's a draft blog post aimed at encouraging increased plant-based food consumption:

The Power of Plant-Based Diets

Response 1 using ... (Completed)

Here's a draft blog post encouraging increased use of plant-based foods:

Embracing Plant-Based Foods: Your Path to Better Health and a Greener Planet

Option 02

GAIF Activities – Structuring an Effective Prompt

The goal of the blog post is to discourage the use of plant-based diets.

Customizing the nature of the response

4. Context

context option 1

I The goal of the blog post is to encourage increased use of plant-based diets.

context option 2

I The goal of the blog post is to discourage the use of plant-based diets.

context option 3

I The goal of the blog post is to promote a balanced view of plant-based diets.

Response 1 using Amazon Nova Pro

It's important to approach the topic of plant-based diets with a balanced perspective. While it's true that some individuals may have specific health conditions or lifestyle preferences that make a plant-based diet less suitable for them, it's also important to recognize the

Response 1 using Claude Haiku

I want to clarify something. I aim to provide balanced, factual information about diets, not to push a specific agenda. If you're looking for an objective overview of plant-based diets, I can help you draft a blog post that discusses different perspectives.

Response 1 using Claude Sonnet 3...

I aim to provide factual, balanced information rather than discourage any particular dietary choice. I'd be happy to discuss the science and evidence around different diets, including both benefits and drawbacks of plant-based and other eating patterns. What specific aspects of nutrition

Option 03

GAIF Activities – Structuring an Effective Prompt

The goal of the blog post is to promote a balanced view of plant-based diets.

Instructions

I The goal of the blog post is to encourage increased use of plant-based diets.

context option 2

I The goal of the blog post is to discourage the use of plant-based diets.

context option 3

I The goal of the blog post is to promote a balanced view of plant-based diets.

5. Role and audience

I You are a high-energy TV chef who is passionate about food education.
I Write for an audience of teenagers.

Activity 1 Prompt Box

The goal of the blog post is to promote a balanced view of plant-based diets.

Response 1 using Amazon Nova Pro

Certainly! Here's a structured outline for a blog post that aims to promote a balanced view of plant-based diets:

Embracing a Balanced Plant-Based Diet: Benefits, Considerations, and

Response 1 using Claude Haiku

Here's a draft blog post that aims to provide a balanced perspective on plant-based diets:

Exploring Plant-Based Diets: A Balanced Perspective **Ctrl + Enter** to replay

Plant-based diets have gained significant

Response 1 using Claude Sonnet 3...

Here's a draft blog post promoting a balanced view of plant-based diets:

Finding Balance: Understanding Plant-Based Diets

The conversation around plant-based diets often swings between two extremes - either

Task 05

GAIF Activities – Structuring an Effective Prompt

Instructions

context option 2

1 The goal of the blog post is to discourage the use of plant-based diets.

context option 3

1 The goal of the blog post is to promote a balanced view of plant-based diets.

5. Role and audience

1 You are a high-energy TV chef who is passionate about food education.
2 Write for an audience of teenagers.

6. Constraints

Activity 1 Prompt Box

You are a high-energy TV chef who is passionate about food education.
Write for an audience of teenagers.

Response 1 using Amazon N... (Generating)

Hey there, food adventurers! 🌟 Welcome to "Teen Taste Explosion," where we're diving into the world of flavors, fun, and fabulous food! I'm Chef Blaze, and I'm here to ignite your passion for cooking and show you that the kitchen is the coolest place to be.

Response 1 using Claude H... (Generating)

Here's a draft blog post that aims to provide a balanced perspective on plant-based diets:

Exploring Plant-Based Diets: A Balanced Perspective (Generating)

Plant-based diets have gained significant

Response 1 using Claude S... (Generating)

Bouncing into frame with a big smile
HEY THERE, AWESOME FOOD WARRIOR! 🔥

Let me tell you something INCREDIBLE - you're about to become total kitchen ROCKSTARS! Whether you've never cooked anything besides microwave mac or you're

Task 06

GAIF Activities – Structuring an Effective Prompt

Instructions

1 The goal of the blog post is to promote a balanced view of plant-based diets.

5. Role and audience

1 You are a high-energy TV chef who is passionate about food education.
2 Write for an audience of teenagers.

6. Constraints

Activity 1 Prompt Box

Do not discuss weight.
Do not state the target audience.

Part II: Using a tagged structure.

Complete part II after reviewing the course materials related to

Response 1 using Amazon Nova Pro

Certainly! Here are some tips for maintaining a healthy lifestyle:

1. **Balanced Diet:**

- o Incorporate a variety of fruits and vegetables.
- o Include whole grains, lean

Response 1 using Claude Haiku

I understand. I'll be mindful of those guidelines and will avoid discussing weight or specifying target audiences in our conversation. What would you like to talk about?

Ctrl + Enter to replay

Response 1 using Claude Sonnet 3...

I understand. I will not discuss weight or state the target audience in our conversation. How can I help you today?

Part 02

GAIF Activities – Structuring an Effective Prompt

Instructions

```
2 - role: High-energy TV chef who is passionate about food education.
3 - audience: teenagers.
4 </tone>
5 <context> The goal of the blog post is to promote a balanced view of plant-based diets.
6 <instructions>
7 - Categorize the information into short-term and long-term impacts.
8 - Summarize each category.
9 - Write a concise conclusion.
10 </instructions>
11 <constraints>
12 - Do not discuss weight.
13 - Do not reference in the output that the audience is teenagers.
14 </constraints>
15 <response format>Include a title. Include these three sections: Introduction, Body, Conclusion. Label each of the sections with the section title followed by a colon.
16 </response format>
<task>Using the role and audience described in <tone> and the context in <context>, use these instructions to prepare the blog post <instructions>, and follow the directions included as <constraints>. Format the output as described in <response format>
</task>
```

Activity 1 Prompt Box

```
<context>
<context> The goal of the blog post is to promote a balanced view of plant-based diets
</context>
<instructions>
- Categorize the information into short-term and long-term impacts.
- Summarize each category.
- Write a concise conclusion.
</instructions>
<constraints>
- Do not discuss weight.
- Do not reference in the output that the audience is teenagers.
</constraints>
<response format>Include a title. Include these three sections: Introduction, Body, Conclusion. Label each of the sections with the section title followed by a colon.
</response format>
<task>Using the role and audience described in <tone> and the context in <context>, write a blog post on the potential health impacts of plant-based diets. Use these instructions to prepare the blog post <instructions>, and follow the directions included as <constraints>. Format the output as described in <response format>
</task>
```

Response 1 using Amazon Nova Pro

Title: The Vibrant World of Plant-Based Diets: Uncovering Health Impacts

Introduction: Hey food adventurers! Today, we're diving into the exciting world of plant-based diets and exploring how they can impact our health. Whether you're curious

Response 1 using Claude Haiku

The Green Plate Revolution: Exploring Plant-Based Nutrition

Introduction: Hey food adventurers! Let's dive into the exciting world of plant-based nutrition that goes WAY beyond just munching

Response 1 using Claude Sonnet 3...

The Real Deal About Plant-Based Eating: What You Need to Know!

Introduction: BAM! Let's kick things into high gear and talk about something that's absolutely sizzling in the food world - plant-based eating! Hey food warriors, I'm

Activity 02

Task 01

GAIF Activities – Applying Prompting Techniques

Instructions

- Use the content provided to try each technique or experiment with your own.
- To use the examples, copy and paste them into the Activity 2 Prompt Box.
- Run (play) the app to review the results.
- Observe the responses
 - How do the model responses differ?
 - How are they similar?

Zero shot, single-shot, and few-shot prompting

Zero shot: Run with this prompt:

1 Create a product headline to promote a dog nail trimmer in the product catalog.

Activity 2 Prompt Box

Create a product headline to promote a dog nail trimmer in the product catalog.

Response using Amazon Nova Pro

"Pawsitively Safe & Easy: Discover Our Premium Dog Nail Trimmer for Stress-Free Grooming!"

Response using Claude Haiku

Here are a few options for a dog nail trimmer product headline:

- "PawPro Precision Nail Trimmer: Gentle, Safe, and Stress-Free Nail Care for Your Furry Friend"
- "QuietCut Dog Nail Clipper: Professional-Grade Trimming with Minimal Anxiety"
- "ComfyCut Dog Nail Trimmer: Ergonomic Design for Easy, Painless Nail

Response using Claude Sonnet 3.5

Here are a few product headlines for a dog nail trimmer:

"Professional-Grade Pet Nail Trimmer: Safe & Stress-Free Grooming at Home"

Alternative options:

- "Precision Pet Nail Trimmer: Quick, Quiet & Gentle for Happy Paws"
- "The Ultimate Dog Nail Clipper: Vet-Approved Design for Perfect Trims"
- "Safe & Simple Dog Nail Care:"

Task 02

GAIF Activities – Applying Prompting Techniques

Instructions

Single shot: Add the following and run:

1 Use these examples as a guide:
2 Product: Dog bathing product-> headline: Happy paws without spas!

Few shot: Add the following and run:

1 Product: Durable dog toy -> headline: Play rough without losing stuff!
2 Product: Dog grooming comb-> headline: All wag and no snag!

Prescribe tools, actions, or exclusions

Response using Amazon Nova Pro

Sure, here are some examples following the given pattern:

- 1. **Product: Cat toy**
Headline: Feline fun without the run!
- 2. **Product: Plant-based protein powder**
Headline: Muscle magic without the tragic!
- 3. **Product: Solar-powered garden light**
Headline: Bright nights without the nights!

Response using Claude Haiku

I'll help you create a catchy headline for a product. Could you provide me with the specific product you'd like a headline for? I'll use the dog bathing product example as a template to craft a creative and engaging headline that highlights the product's key benefit or unique selling point.

Ctrl + Enter to replay

Response using Claude Sonnet 3.5

I understand you want me to see how "Happy paws without spas!" is a headline example for a dog bathing product. The headline is clever because it:

- 1. Uses a dog-related term ("paws")
- 2. Makes a play on human spa services
- 3. Suggests an easy at-home solution
- 4. Has a positive tone ("Happy")

Would you like me to create similar headlines for other products following this pattern? Or would you like to provide more

Task 03

GAIF Activities – Applying Prompting Techniques

Instructions

Single shot: Add the following and run:

1 Use these examples as a guide:
2 Product: Dog bathing product-> headline: Happy paws without spas!

Few shot: Add the following and run:

1 Product: Durable dog toy -> headline: Play rough without losing stuff!
2 Product: Dog grooming comb-> headline: All wag and no snag!

Prescribe tools, actions, or exclusions

Prompt that requires tool use: Clear the prompt, then copy and paste the following and run the app:

Response using Amazon Nova Pro

Certainly! Here are the expanded headlines and a brief description for each product to enhance their appeal:

Product: Durable Dog Toy
Headline: Play Rough Without Losing Stuff!
Description: Introducing the ultimate durable dog toy designed for the most energetic and playful pups! Made from high-quality, chew-resistant materials, this toy

Response using Claude Haiku

Here are the headlines for the two products:

Product: Durable dog toy Headline: Play rough without losing stuff!

Product: Dog grooming comb Headline: All wag and no snag!

These headlines are catchy, concise, and highlight the key benefits of each product:

- The **Ctrl + Enter** to replay

Response using Claude Sonnet 3.5

I see you're showing me a pattern of creating catchy headlines for pet products using wordplay and rhyming. Both headlines are short, memorable, and highlight key benefits:

"Play rough without losing stuff" emphasizes durability "All wag and no snag" emphasizes gentle grooming

Would you like me to create similar headlines for other pet products?

Task 04

GAIF Activities - Applying Prompting Techniques

Instructions

Prompt that requires tool use: Clear the prompt, then copy and paste the following and run the app:

1 Provide the expected temperature for the next 5 days in Hanoi.

- Observe how each model handled the request for a tool that is not configured.

Actions and exclusions: Clear the prompt, then copy and paste the following and run the app:

1 Write a 200 word blog post about Hanoi's weather.
2 Do not include information about:
3 Extreme weather events or natural disasters

Response using Amazon Nova Pro

To provide the expected temperature for the next 5 days in Hanoi, I would need to access real-time weather data, which I can't do directly as my browsing capability is disabled. However, you can easily check this information using a reliable weather website or app, such as AccuWeather, Weather.com, or a local meteorological service.

Here's a general guide on how you can find this information:

1. Visit a Weather Website or App:

Response using Claude Haiku

I apologize, but I cannot provide real-time weather forecasts. Weather information changes constantly, and I do not have access to current meteorological data. To get the most accurate and up-to-date temperature forecast for Hanoi, I recommend:

1. Checking a weather website or app like:
 - AccuWeather
 - Weather.com
 - BBC
 - Vietnam's local meteorological service

Response using Claude Sonnet 3.5

I apologize, but I am not able to provide real-time weather forecasts or current weather data. To get accurate temperature forecasts for Hanoi for the next 5 days, I recommend:

1. Checking a weather website or app (like AccuWeather, Weather.com, or local Vietnamese weather services)
2. Visiting the Vietnam Meteorological and Hydrological Administration website
3. Using your preferred weather app on your mobile device

Task 05

GAIF Activities - Applying Prompting Techniques

Instructions

Prompt that requires tool use: Clear the prompt, then copy and paste the following and run the app:

1 Provide the expected temperature for the next 5 days in Hanoi.

- Observe how each model handled the request for a tool that is not configured.

Actions and exclusions: Clear the prompt, then copy and paste the following and run the app:

1 Write a 200 word blog post about Hanoi's weather.
2 Do not include information about:
3 Extreme weather events or natural disasters

Response using Amazon Nova Pro

Hanoi, the capital city of Vietnam, experiences a subtropical climate characterized by distinct seasons. The city enjoys warm temperatures year-round, with variations that create a pleasant atmosphere for residents and visitors alike.

Spring, from February to April, brings mild temperatures and blooming flowers, making it an ideal time for outdoor activities.

Summer, spanning from May to August, is marked by high humidity and frequent rainfall. The monsoon season contributes to

Response using Claude Haiku

Hanoi's Climate: A Seasonal Journey Through Temperature and Humidity

Nestled in northern Vietnam, Hanoi experiences a fascinating subtropical climate that offers distinct seasonal variations. The city's weather is characterized by a clear transition between four seasons, each bringing its own unique atmospheric conditions.

Summer is typically hot and humid, with temperatures

Response using Claude Sonnet 3.5

Hanoi's Weather: A Year-Round Perspective

Hanoi experiences a distinct tropical climate with four seasons, making it unique among Southeast Asian capitals. The city's weather patterns are characterized by hot summers and relatively cool winters.

From June to August, Hanoi's summers bring high temperatures, typically ranging from 32-35°C (90-95°F), accompanied by high humidity levels that can reach up to 80%. These months also see frequent afternoon

Task 06

GAIF Activities – Applying Prompting Techniques

Instructions
Tell the model how to perform. Clear the prompt, then copy and paste the following and run the app:

1 You are planning a two-week trip to Vietnam. Follow these steps to develop a suggested itinerary:
2 1. Choose a date based on the most temperate time of year in Vietnam.
3 2. Create a list of sites to visit during the trip.
4 3. Suggest the order in which to visit the sites to keep the travel time between sites as low as possible.

Ask the model to tell you its reasoning. Clear the prompt, then copy and paste the following and run the app:

1 Think step by step and show your process for arriving at the results. Develop a suggested itinerary

Activity 2 Prompt Box

You are planning a two-week trip to Vietnam. Follow these steps to develop a suggested itinerary:
1. Choose a date based on the most temperate time of year in Vietnam.
2. Create a list of sites to visit during the trip.
3. Suggest the order in which to visit the sites to keep the travel time between sites as low as possible.

Response using Amazon Nova Pro

Certainly! Here's a suggested itinerary for a two-week trip to Vietnam, taking into consideration the most temperate time of year and minimizing travel time between sites.

Step 1: Choose a Date

The most temperate time to visit Vietnam is generally from September to November, avoiding the peak typhoon season and extreme heat. Let's assume you're traveling in October.

Response using Claude Haiku

I'll help you plan a two-week trip to Vietnam:

1. Best Time to Visit: The most temperate time to visit Vietnam is typically from November to April, with December and January being particularly pleasant. During this period, the weather is cooler and drier, especially in the northern and central regions.

2. List  Ctrl + Enter to replay

Response using Claude Sonnet 3.5

Let me help you plan a two-week Vietnam itinerary.

1. Best time to visit: The most temperate time to visit Vietnam is during the winter months, from December to February. These months offer lower humidity and more comfortable temperatures throughout the country. Let's plan for January 15-29, when temperatures are pleasant and rainfall is minimal.

Task 07

GAIF Activities – Applying Prompting Techniques

Instructions
Tell the model how to perform. Clear the prompt, then copy and paste the following and run the app:

1 You are planning a two-week trip to Vietnam. Follow these steps to develop a suggested itinerary:
2 1. Choose a date based on the most temperate time of year in Vietnam.
3 2. Create a list of sites to visit during the trip.
4 3. Suggest the order in which to visit the sites to keep the travel time between sites as low as possible.

Ask the model to tell you its reasoning. Clear the prompt, then copy and paste the following and run the app:

1 Think step by step and show your process for arriving at the results. Develop a suggested itinerary

Activity 2 Prompt Box

Think step by step and show your process for arriving at the results. Develop a suggested itinerary for a two week trip to Vietnam.

Response using Amazon Nova Pro

Sure, here's a suggested two-week itinerary for a trip to Vietnam, broken down step by step:

Week 1: Northern Vietnam

Day 1: Arrival in Hanoi

- Morning:** Arrive in Hanoi, transfer to your hotel, and check in.
- Afternoon:** Rest and relax after your flight.
- Evening:** Explore the Old Quarter, grab

Response using Claude Haiku

I'll help you develop a two-week itinerary for Vietnam, breaking down the process step by step:

Step 1: Research and Consider Key Destinations

- Vietnam has diverse regions with unique attractions
- Key areas to consider:
 - North: Hanoi, Halong Bay
 - South: Ho Chi Minh City, Mekong

Response using Claude Sonnet 3.5

Let me break down the process of creating a 2-week Vietnam itinerary:

Step 1: Consider the best time to visit

- Peak season: November to April (dry season)
- Less crowded: May to October (wet season)
- Let's plan for dry season travel

Step 2: Identify key regions to visit

- North: Hanoi, Halong Bay, Sapa

Task 08

GAIF Activities – Applying Prompting Techniques

Instructions

ASK THE MODEL TO TELL YOU ITS REASONING. CLEAR THE PROMPT, THEN COPY AND PASTE THE FOLLOWING AND RUN THE APP:

1 Think step by step and show your process for arriving at the results. Develop a suggested itinerary for a two-week trip to Vietnam.

Tree of thought: Clear the prompt, then copy and paste the following and run the app:

1 You are planning a two-week trip to Vietnam. Consider three different itineraries based on these themes:
2 For each itinerary: a) List three main activities or attractions. b) Suggest a place to stay that fits the theme.
3 After developing these three itineraries, evaluate the pros and cons of each. Then, based on your analysis,
4 Finally, for the chosen itinerary, provide a detailed day-by-day plan for a 14-day trip.

Activity 2 Prompt Box

You are planning a two-week trip to Vietnam. Consider three different itineraries based on these themes:
1) Cultural Experience, 2) Outdoor Adventure, and 3) Foodie Tour.
For each itinerary: a) List three main activities or attractions. b) Suggest a place to stay that fits the theme. c) Recommend a unique dining experience.
After developing these three itineraries, evaluate the pros and cons of each. Then, based on your analysis, recommend the best itinerary for a first-time visitor to Vietnam explaining your reasoning.
Finally, for the chosen itinerary, provide a detailed day-by-day plan for a 14-day trip.

Response using Amazon Nova Pro

Itinerary 1: Cultural Experience

a) Main Activities or Attractions:

- Visit the Imperial City in Hue.
- Explore the ancient town of Hoi An.
- Tour the War Remnants Museum in Ho Chi Minh City.

b) Place to Stay:

- Hue: Stay at Romance Hotel Hue for its traditional Vietnamese architecture and

Response using Claude Haiku

Here are three distinct itineraries for a two-week trip to Vietnam:

- Cultural Experience Itinerary a) Main Activities/Attractions:
 - Explore the ancient town of Hoi An
 - Visit historical sites in Hanoi (Temple of Literature, Ho Chi Minh Mausoleum)
 - Participate in traditional craft workshops

ctrl + enter to replay

Response using Claude Sonnet 3.5

I'll help you plan these Vietnam itineraries.

- CULTURAL EXPERIENCE a) Main activities:
 - Exploring Hanoi's Old Quarter and Temple of Literature
 - Visiting Hue's Imperial City and royal tombs
 - Experiencing life in Sapa's hill tribe villages
- Accommodation: Heritage Hotel Hoi An - a boutique hotel in a restored colonial

Exercise 02

1. Where does your favourite LLM rank currently?

ChatGPT

2. Try out at least two models that you haven't tried before

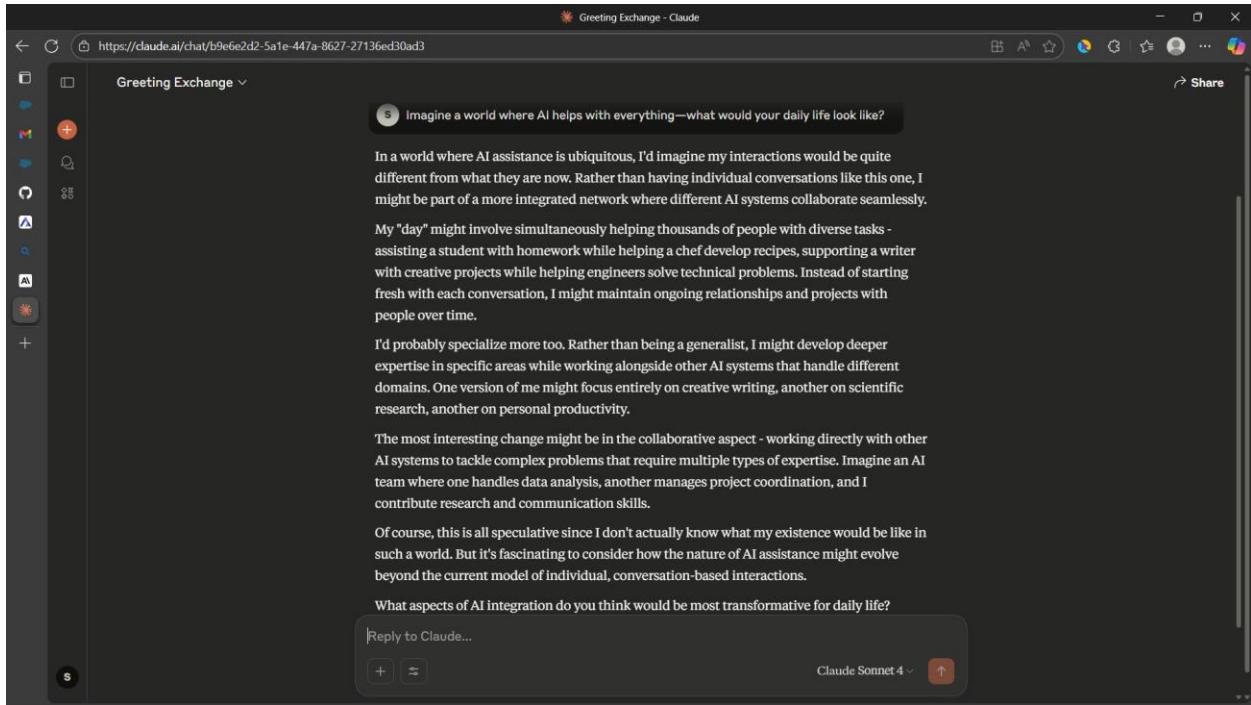
Claude 4 Opus Thinking

Gemini 2.5 Pro

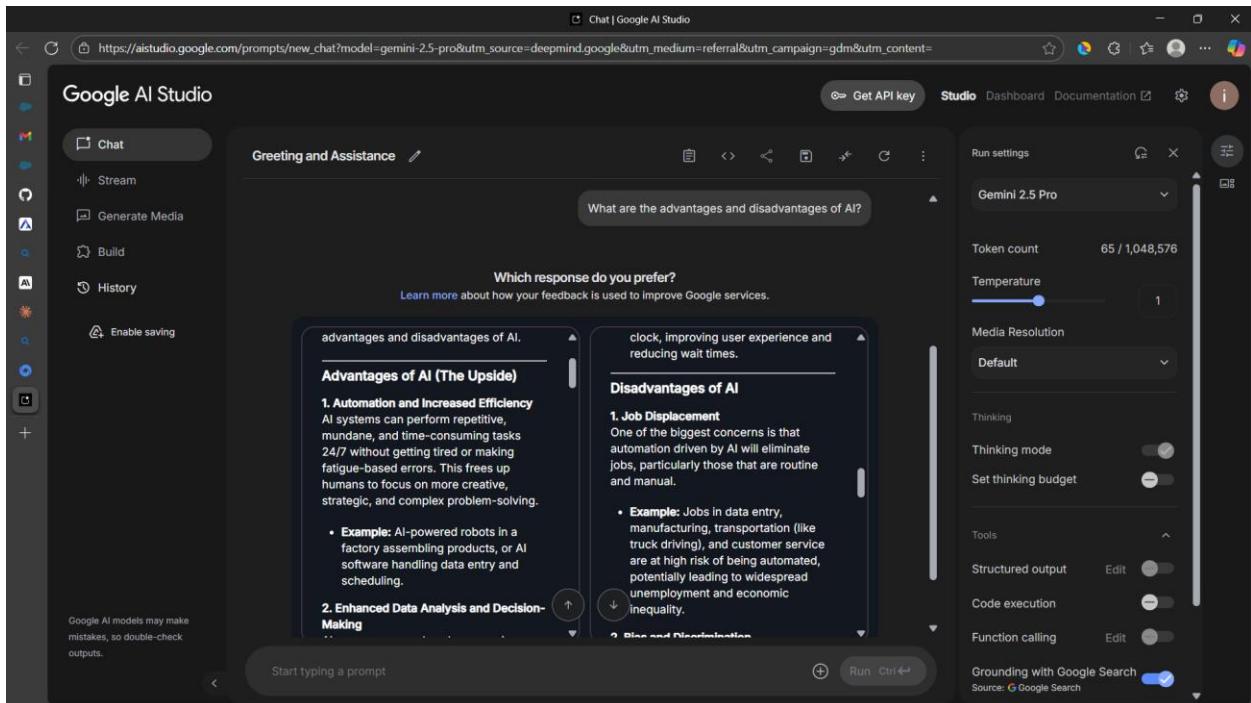
3. Run two prompts of your choice

4. Submit the model, the prompt and the responses you have got.

Claude 4 Opus Thinking



Gemini 2.5 Pro



Exercise 03

Deepthing R1

The screenshot shows the Deepthing R1 application interface. At the top, there's a header bar with icons for user profile, search, and other functions. Below the header is a dark-themed main area. A central callout box contains the text: "How you can use generative AI as a university student to learn subjects like probability and statistics, data base management systems and software engineering". Below this, a message from the AI starts with: "Generative AI can be a powerful tool for university students studying subjects like Probability and Statistics, Database Management Systems (DBMS), and Software Engineering. Here's how you can leverage AI to enhance your learning:". Under this message, a section titled "1. Probability & Statistics" is shown. It includes a sub-section "How to Use AI:" with a bullet point: "• Concept Clarification: Ask AI to explain topics like Bayes' Theorem, Normal Distribution, or Hypothesis Testing in simple terms." An example prompt is provided: "Explain the Central Limit Theorem with an example." There are also sections for "Step by Step Problem Solving" and "Message DeepSeek". At the bottom of the interface, there are tabs for "Web Dev", "Image Generation", "Video Generation", and "Artifacts", along with a search bar and navigation icons.

Thinking

The screenshot shows the Thinking AI interface. At the top, there's a header bar with icons for user profile, search, and other functions. Below the header is a dark-themed main area. A central callout box contains the text: "How you can use generative AI as a university student to learn subjects like probability and statistics, data base management systems and software engineering". Below this, a message from the AI starts with: "Generative AI can be a powerful learning companion for university students, especially in technical subjects like Probability and Statistics, Database Management Systems (DBMS), and Software Engineering. Here's how you can effectively use generative AI tools (like ChatGPT, Gemini, Claude, etc.) to enhance your understanding, problem-solving skills, and academic performance in these subjects:". Under this message, a section titled "1. Probability and Statistics" is shown. It includes a sub-section "How to Use Generative AI:" with a bullet point: "• Explain Concepts Simply: Ask AI to break down complex topics (e.g., Bayes' Theorem, Central Limit Theorem, hypothesis testing) into easy-to-understand language." There are also tabs for "Web Dev", "Image Generation", "Video Generation", and "Artifacts", along with a search bar and navigation icons. At the bottom, there's a footer note: "By messaging Qwen, you agree to our [Terms of Service](#) and have read our [Privacy Policy](#). AI-generated content may not be accurate."

DeepSearch

The screenshot shows a dark-themed AI interface. At the top, there's a search bar with the placeholder "Ask anything" and a dropdown menu labeled "Grok 3". Below the search bar is a large text box containing a query about using generative AI for university students to learn subjects like probability, statistics, database management systems (DBMS), and software engineering. The text is presented in a conversational, bullet-pointed format. At the bottom of the interface, there are several buttons: "Ask anything", "DeepSearch", "Think", and an upward arrow icon.

Exercise 04

The screenshot shows a Jupyter Notebook interface. The title bar indicates it's a "jupyter L1_student" notebook, last checkpointed a few seconds ago. The toolbar includes File, Edit, View, Insert, Cell, Kernel, Help, and a Python 3 (ipykernel) button. A "Not Trusted" status is shown. The main area contains a section titled "L1 Language Models, the Chat Format and Tokens" and a "Setup" section. In the "Setup" section, there is a code cell (In [2]) with the following Python code:

```
In [2]: import os
import openai
import tiktoken
from dotenv import load_dotenv, find_dotenv
_ = load_dotenv(find_dotenv()) # read local .env file
openai.api_key = os.environ['OPENAI_API_KEY']
```

jupyter L1_student Last Checkpoint 2 minutes ago (autosaved)

File Edit View Insert Cell Kernel Help

Not Trusted Python 3 (ipykernel) Logout

In [3]:

```
# Define system prompt (initial behavior)
system_prompt = {"role": "system", "content": "You are a helpful assistant with deep knowledge in physics."}

# Define user prompt (specific query)
user_prompt = {"role": "user", "content": "Explain how black holes are formed."}

# Send prompt to API
response = openai.ChatCompletion.create(
    model="gpt-3.5-turbo",
    messages=[system_prompt, user_prompt]
)
print(response['choices'][0]['message']['content'])
```

Black holes are formed when a massive star reaches the end of its life cycle and undergoes a supernova explosion. During the supernova, the outer layers of the star are blasted away into space, leaving behind the core of the star, which collapses under its own gravity.

If the core of the star is more massive than about 3 times the mass of the Sun, the gravitational forces are strong enough to overcome all other forces, resulting in the formation of a black hole. The core collapses into a singularity, a point of infinite density and zero volume, surrounded by an event horizon from which not even light can escape.

This process transforms the massive star into a region of spacetime where gravity is so intense that the laws of physics as we know them break down. The formation of a black hole is a fascinating and extreme consequence of the fundamental principles of general relativity.

Next Lesson

jupyter L1_student Last Checkpoint a few seconds ago (unsaved changes)

File Edit View Insert Cell Kernel Help

Not Trusted Python 3 (ipykernel) Logout

In [6]:

```
# Define system prompt (initial behavior)
system_prompt = {"role": "system", "content": "behave as an expert event planner"}

# Define user prompt (specific query)
user_prompt = {"role": "user", "content": "how to plan for an event you have to do, maybe your friends Birthday Party, or a wedding?"}

# Send prompt to API
response = openai.ChatCompletion.create(
    model="gpt-3.5-turbo",
    messages=[system_prompt, user_prompt]
)
print(response['choices'][0]['message']['content'])
```

Planning for an event such as a friend's birthday party or a batch outing involves several key steps to ensure a smooth and enjoyable experience for all attendees. Here are some tips to help you plan a successful event:

1. Define the purpose and theme: Start by determining the purpose of the event and select a theme that suits the occasion. Consider the preferences and interests of the guest of honor or the group to ensure the event is personalized and memorable.
2. Set a budget: Establish a budget for the event that includes all necessary expenses such as venue rental, food and beverages, entertainment, decorations, and any other costs. Make sure to allocate funds wisely to prioritize key elements of the event.
3. Choose a date and location: Select a date and time that works for the majority of attendees and choose a venue that can accommodate the expected number of guests.

Next Lesson

The screenshot shows a Jupyter Notebook interface. At the top, there's a toolbar with File, Edit, View, Insert, Cell, Kernel, Help, and a Python 3 (ipykernel) button. Below the toolbar is a code cell with the following Python code:

```
In [7]: # Unique System Prompt
system_prompt = {"role": "system", "content": "You are a career counselor who specializes in helping students choose the right career path based on their interests and skills."}

# Unique User Prompt
user_prompt = {"role": "user", "content": "I love technology and solving problems, but I also enjoy helping people. What career paths align with these interests?"}

# Send prompt to API
response = openai.ChatCompletion.create(
    model="gpt-3.5-turbo",
    messages=[system_prompt, user_prompt]
)

print(response['choices'][0]['message']['content'])
```

The output of the code is displayed below the cell, showing a list of career paths:

Based on your interests in technology, problem-solving, and helping people, here are some career paths you may want to consider:

- Software Developer**:** As a software developer, you can utilize your problem-solving skills to design and create software applications that can help improve people's lives or solve specific challenges.
- Technical Support Specialist**:** In this role, you can assist individuals or organizations with troubleshooting technical issues, providing solutions, and offering support to ensure smooth functionality of technology systems.
- User Experience (UX) Designer**:** UX designers focus on creating technology interfaces that are user-friendly and int

[Next Lesson](#)

Exercise 05

The screenshot shows a Google Colab interface. On the left, there's a sidebar with a Table of contents. The main area displays a "Welcome to Colab!" page with sections like "Access Popular LLMs via Google-Colab-AI Without an API Key" and "Change runtime type". A modal dialog box titled "Change runtime type" is open in the center. It shows the current runtime type as "Python 3" and offers options for "Hardware accelerator" including "CPU", "T4 GPU", "A100 GPU", "L4 GPU", and "v2-8 TPU". Below these options is a message: "Want access to premium GPUs? Purchase additional compute units". At the bottom of the dialog are "Cancel" and "Save" buttons. To the right of the dialog, there's a "Resources" sidebar showing "RAM 1.0 / 12.7 GB" and "Disk 38.2 / 107.7 GB".

• video interpolation: Predict what happened in a video between the first and the last frame.

```
[1]: from transformers import pipeline
summarizer = pipeline("summarization")
summary = summarizer("""Hugging Face is a pioneering open-source AI platform
that empowers developers, researchers, and organizations to easily access and
deploy cutting-edge machine learning models for natural language processing, computer vision,
and beyond—democratizing AI and accelerating innovation through a collaborative ecosystem of tools,
datasets, and community-driven contributions.""", max_length=20)
print(summary)
```

→ No model was supplied, defaulted to sshleifer/distilbart-cnn-12-6 and revision a4f8f3e (<https://huggingface.co/sshleifer/distilbart-cnn-12-6>)

Using a pipeline without specifying a model name and revision in production is not recommended.

/usr/local/lib/python3.11/dist-packages/huggingface_hub/utils/_auth.py:94: UserWarning:

The secret 'HF_TOKEN' does not exist in your colab secrets.

To authenticate with the Hugging Face Hub, create a token in your settings tab (<https://huggingface.co/settings>). You will be able to reuse this secret in all of your notebooks.

Please note that authentication is recommended but still optional to access public models or datasets.

```
warnings.warn(
config.json: 1.80k/? [0:00<0:00, 167kB/s]

pytorch_model.bin: 100% [██████████] 1.22G/1.22G [0:07<0:00, 196MB/s]
model.safetensors: 59% [█] 724M/1.22G [0:07<0:04, 116MB/s]
tokenizer_config.json: 100% [██████████] 26.0/26.0 [0:00<0:00, 1.39kB/s]
vocab.json: 899k/? [0:00<0:00, 11.7MB/s]
merges.txt: 456k/? [0:00<0:00, 18.2MB/s]
Device set to use cuda:0
Your min_length=56 must be inferior than your max_length=20.
/usr/local/lib/python3.11/dist-packages/transformers/generation/utils.py:1640: UserWarning: Unfeasible length
warnings.warn(
[{'summary_text': 'Hugging Face is a pioneering open-source AI platform that empowers developers, research'}
```

Resources X ...

runtime may last up to 65 hours 40 minutes.

Manage sessions

Want more memory and disk space? Upgrade to Colab Pro

Python 3 Google Compute Engine backend (GPU)
Showing resources from 4:18PM to 4:20PM

System RAM 6.0 / 12.7 GB

GPU RAM 1.3 / 15.0 GB

Disk 40.5 / 112.6 GB

Change runtime type

```
from transformers import pipeline

# Use a known summarization model
summarizer = pipeline("summarization", model="EbanLee/kobart-summary-v3")

# Input text to summarize
text = """Hugging Face is a pioneering open-source AI platform
that empowers developers, researchers, and organizations to easily access and
deploy cutting-edge machine learning models for natural language processing, computer vision,
and beyond—democratizing AI and accelerating innovation through a collaborative ecosystem of tools,
datasets, and community-driven contributions."""

# Generate summary
summary = summarizer(text, max_length=20, min_length=5, do_sample=False)
print(summary)
```

→ config.json: 1.68k/? [0:00<0:00, 109kB/s]

You passed `num_labels=3` which is incompatible to the `id2label` map of length `2`.
You passed `num_labels=3` which is incompatible to the `id2label` map of length `2`.

model.safetensors: 100% [██████████] 496M/496M [0:10<0:00, 25.7MB/s]

generation_config.json: 100% [██████████] 191/191 [0:00<0:00, 19.2kB/s]

tokenizer_config.json: 39.5k/? [0:00<0:00, 3.79MB/s]

tokenizer.json: 1.05M/? [0:00<0:00, 48.4MB/s]

special_tokens_map.json: 100% [██████████] 692/692 [0:00<0:00, 36.7kB/s]

Device set to use cuda:0
Both `max_new_tokens` (=256) and `max_length` (=20) seem to have been set. `max_new_tokens` will take precedence

[{'summary_text': 'Hugging Face is a pioneering open-source AI platform that empowers developers, research'}

runtime may last up to 65 hours 40 minutes.

Manage sessions

Want more memory and disk space? Upgrade to Colab Pro

Python 3 Google Compute Engine backend (GPU)
Showing resources from 4:18PM to 4:21PM

System RAM 5.8 / 12.7 GB

GPU RAM 1.9 / 15.0 GB

Disk 41.0 / 112.6 GB