TBIC AAI-101 Workbook

Suresh Sundarrajan (Sunny)  
AAI-101 Introduction to AI tools

**Part I**

[**How to Login for Codeboxx Site 2**](#_hzkqlc1zukap)

[**Exercise 1.0 Compare and contrast the responses for First and Second Pass for same Prompt 3**](#_31l0vclxx15n)

[**Exercise 1.1 Rock Music Genres 4**](#_29rp34leue03)

[1. Rise of Blockbusters & Franchise Films 4](#_qrxl5f6b8gs2)

[2. The Reagan Era & Conservative Themes 4](#_7lfssf5exsz4)

[3. The Home Video Revolution 4](#_sh4d7hp3id3n)

[4. The Golden Age of Action Stars 5](#_aph9mrlvjkdr)

[5. Teen Movies & The Brat Pack 5](#_w3pnmubuzc3m)

[6. Sci-Fi & Special Effects Boom 5](#_204iuk3478p)

[7. Rise of Horror & Slasher Films 5](#_ad313zv14ui0)

[8. Comedy Dominance 5](#_hcokfi8gjk2r)

[9. Musical & Dance Films 5](#_czaj3o58ru9f)

[10. Independent & Art Films Gaining Ground 6](#_1arjww5dom63)

[Conclusion 6](#_tbqsuc2a9koj)

[**Exercise 1.2 Compare and contrast the responses using Regenerate Button 6**](#_968u6zxwge3o)

[1. Rise of Blockbusters & Franchise Films 6](#_1f46gnmntv1j)

[2. The Golden Age of Action Movies 6](#_fo2xwr9zb5g9)

[3. The Birth of the Modern Teen Movie 6](#_8rph08chi63s)

[4. The Rise of Home Video & VHS Boom 7](#_vl4857acs3y)

[5. Special Effects Revolution 7](#_8dz83sxdhdr2)

[6. The Expansion of Comedy 7](#_q2xqi2q2fatx)

[7. Horror Boom & Slasher Films 7](#_i4n684pkruee)

[8. Stronger Female Leads & Action Heroines 7](#_wf26ubgx26rx)

[9. The Influence of MTV & Pop Music in Films 7](#_r3dcp7ywjrry)

[10. Rise of Independent Cinema 8](#_g0p7kwbl99wb)

[**Exercise 2.1 Create a Poem on topic of your Choice 8**](#_nu0id4bzmtz8)

[**Exercise 3.1 Translate to German 9**](#_8pbjsxz4nx9n)

[1. Aufstieg der Blockbuster & Filmreihen 9](#_bph0xcfsybed)

[2. Das goldene Zeitalter der Actionfilme 10](#_g0kmtc6saklq)

[3. Die Geburt des modernen Teenager-Films 10](#_ctvggbccafdb)

[4. Aufstieg des Heimvideos & VHS-Boom 10](#_rpthj9vi2wnq)

[5. Revolution der Spezialeffekte 10](#_baob03mco8mx)

[6. Expansion der Komödien 11](#_r4w20nz1ehj6)

[7. Horror-Boom & Slasher-Filme 11](#_sp4vwrdgrrr)

[8. Stärkere weibliche Hauptfiguren & Actionheldinnen 11](#_9pzd18pqpe34)

[9. Der Einfluss von MTV & Popmusik in Filmen 11](#_fxyie6sef72v)

[10. Aufstieg des Independent-Kinos 11](#_w5xe3g85rcc2)

[**Exercise 5.1 Everyday Life 12**](#_t9q6luau9tor)

[**Exercise 5.2 Current Events 15**](#_6sefa5w77tpk)

[**Exercise 5.2 Current Events in Technology space 15**](#_8cjtmt3k9yef)

[**Exercise 5.3 Modify Response 18**](#_pjcz5pk908ve)

[**Put your input response into your delivery document under Exercise 5.3 18**](#_b0odyqpdetnl)

[**Microsoft CoPilot Section 18**](#_8182l7b9u1pm)

[**Microsoft Copilot AI is a suite of artificial intelligence-powered tools that can help you with your research, learning, and other tasks. Microsoft Copilot AI is an extension of Microsoft’s search engine, Microsoft Copilot, and it uses natural language processing and machine learning algorithms to provide users with more accurate and relevant search results. The tool is powered by a next-generation OpenAI large language model that is more powerful than ChatGPT and customized specifically for search. 18**](#_3q6obmvv75on)

[**Exercise 6.1 Describe a Typical Day at work for a Pharma Quality Engineer involved with a CDMO company 19**](#_n3xzfzc4woue)

[Typical Day for a Pharma Quality Engineer at a CDMO Company 19](#_qacobxuqopd5)

[**Exercise 6.2, What are the Key Impacts of Micro Plastics on Ocean Pollution? 20**](#_4lcnqxdr0g1n)

[**Summary of Business Document 22**](#_f39g2uw6xuz9)

# How to Login for Codeboxx Site

Hello Suresh,

You have been registered for:

<https://codeboxx.docebosaas.com/lms/index.php?r=site/index>

Username: suresh2621a@gmail.com

Reset Your password

Welcome to the Academy!

[**How to Login for Codeboxx Site 2**](#_hzkqlc1zukap)

[**Exercise 1.0 Compare and contrast the responses for First and Second Pass for same Prompt 3**](#_31l0vclxx15n)

[**Exercise 1.1 Rock Music Genres 4**](#_29rp34leue03)

[1. Rise of Blockbusters & Franchise Films 4](#_qrxl5f6b8gs2)

[2. The Reagan Era & Conservative Themes 4](#_7lfssf5exsz4)

[3. The Home Video Revolution 4](#_sh4d7hp3id3n)

[4. The Golden Age of Action Stars 5](#_aph9mrlvjkdr)

[5. Teen Movies & The Brat Pack 5](#_w3pnmubuzc3m)

[6. Sci-Fi & Special Effects Boom 5](#_204iuk3478p)

[7. Rise of Horror & Slasher Films 5](#_ad313zv14ui0)

[8. Comedy Dominance 5](#_hcokfi8gjk2r)

[9. Musical & Dance Films 5](#_czaj3o58ru9f)

[10. Independent & Art Films Gaining Ground 6](#_1arjww5dom63)

[Conclusion 6](#_tbqsuc2a9koj)

[**Exercise 1.2 Compare and contrast the responses using Regenerate Button 6**](#_968u6zxwge3o)

[1. Rise of Blockbusters & Franchise Films 6](#_1f46gnmntv1j)

[2. The Golden Age of Action Movies 6](#_fo2xwr9zb5g9)

[3. The Birth of the Modern Teen Movie 6](#_8rph08chi63s)

[4. The Rise of Home Video & VHS Boom 7](#_vl4857acs3y)

[5. Special Effects Revolution 7](#_8dz83sxdhdr2)

[6. The Expansion of Comedy 7](#_q2xqi2q2fatx)

[7. Horror Boom & Slasher Films 7](#_i4n684pkruee)

[8. Stronger Female Leads & Action Heroines 7](#_wf26ubgx26rx)

[9. The Influence of MTV & Pop Music in Films 7](#_r3dcp7ywjrry)

[10. Rise of Independent Cinema 8](#_g0p7kwbl99wb)

[**Exercise 2.1 Create a Poem on topic of your Choice 8**](#_nu0id4bzmtz8)

[**Exercise 3.1 Translate to German 9**](#_8pbjsxz4nx9n)

[1. Aufstieg der Blockbuster & Filmreihen 9](#_bph0xcfsybed)

[2. Das goldene Zeitalter der Actionfilme 10](#_g0kmtc6saklq)

[3. Die Geburt des modernen Teenager-Films 10](#_ctvggbccafdb)

[4. Aufstieg des Heimvideos & VHS-Boom 10](#_rpthj9vi2wnq)

[5. Revolution der Spezialeffekte 10](#_baob03mco8mx)

[6. Expansion der Komödien 10](#_r4w20nz1ehj6)

[7. Horror-Boom & Slasher-Filme 11](#_sp4vwrdgrrr)

[8. Stärkere weibliche Hauptfiguren & Actionheldinnen 11](#_9pzd18pqpe34)

[9. Der Einfluss von MTV & Popmusik in Filmen 11](#_fxyie6sef72v)

[10. Aufstieg des Independent-Kinos 11](#_w5xe3g85rcc2)

[**Exercise 5.1 Everyday Life 12**](#_t9q6luau9tor)

[**Exercise 5.2 Current Events 15**](#_6sefa5w77tpk)

[**Exercise 5.2 Current Events in Technology space 15**](#_8cjtmt3k9yef)

[**Exercise 5.3 Modify Response 18**](#_pjcz5pk908ve)

[**Put your input response into your delivery document under Exercise 5.3 18**](#_b0odyqpdetnl)

[**Microsoft CoPilot Section 18**](#_8182l7b9u1pm)

[**Microsoft Copilot AI is a suite of artificial intelligence-powered tools that can help you with your research, learning, and other tasks. Microsoft Copilot AI is an extension of Microsoft’s search engine, Microsoft Copilot, and it uses natural language processing and machine learning algorithms to provide users with more accurate and relevant search results. The tool is powered by a next-generation OpenAI large language model that is more powerful than ChatGPT and customized specifically for search. 18**](#_3q6obmvv75on)

# Exercise 1.0 Compare and contrast the responses for First and Second Pass for same Prompt

How they are the same:

Both have 10 point summaries  
Both have some similar items with different titles

The Reagan Era politics is mentioned in the first one, but not skipped on the second run

Second one had Item8 which was “Stronger Female Leads an Heroines” but no mention in first pass

The Home video revolution is mentioned in both attempts, but title and content are not exactly same

In first pass, Comedy Dominance is mentioned. In 2nd pass, it is called Expansion of Comedy

Teen movies are mentioned in both, but Titles are different and generated content is also different

In sum, both responses have same number of bullet points (10), and many replies are very similar

But then, there are also several marked differences which clearly indicate that same prompt can produce different results.

Start

# Exercise 1.1 Rock Music Genres

PQL>  
Enter an open-ended question into the prompt window. We used, "What were the important trends in rock and roll during the 1980s?"

When the response is completed, click the Regenerate button. Put your input prompt and response into your delivery document under Exercise 1.1

Exercise 1.1  
OpenAI  
[chat.openai.com](http://chat.openai.com)

PQL>

**What were the important trends in Hollywood in 1980s?**

**Response>**

**The 1980s was a transformative decade for Hollywood, marked by significant trends that shaped the film industry. Here are some of the most important ones:**

### **1. Rise of Blockbusters & Franchise Films**

* **The success of *Star Wars* (1977) ushered in an era of high-budget, high-concept films designed for mass appeal. The 1980s saw the rise of blockbuster franchises like:**
  + ***Indiana Jones* (1981, 1984, 1989)**
  + ***Star Wars* sequels (*The Empire Strikes Back* in 1980, *Return of the Jedi* in 1983)**
  + ***Back to the Future* (1985)**
  + ***Ghostbusters* (1984)**
  + ***Batman* (1989)**
* **Studios increasingly focused on sequels and merchandising tie-ins.**

### **2. The Reagan Era & Conservative Themes**

* **Films reflected the political climate under President Ronald Reagan, emphasizing themes of patriotism, capitalism, and individual heroism.**
* ***Top Gun* (1986) and *Rambo: First Blood Part II* (1985) glorified military strength and American exceptionalism.**
* **The “yuppie” culture of success and materialism was reflected in films like *Wall Street* (1987) and *The Secret of My Success* (1987).**

### **3. The Home Video Revolution**

* **The rise of VHS and video rental stores (like Blockbuster, founded in 1985) changed viewing habits, making films more accessible at home.**
* **Direct-to-video films became a viable market for lower-budget productions.**
* **The video rental industry also influenced box office revenues, as films found second lives on home video.**

### **4. The Golden Age of Action Stars**

* **Muscular, larger-than-life heroes dominated the screen, led by actors like:**
  + **Arnold Schwarzenegger (*The Terminator*, *Predator*, *Commando*)**
  + **Sylvester Stallone (*Rocky* sequels, *Rambo* series)**
  + **Bruce Willis (*Die Hard*)**
  + **Jean-Claude Van Damme (*Bloodsport*)**
* **Practical effects and stunt work made these action films even more thrilling.**

### **5. Teen Movies & The Brat Pack**

* **The rise of teen-oriented films reflected youth culture, with directors like John Hughes defining the genre.**
* ***The Breakfast Club* (1985), *Sixteen Candles* (1984), *Ferris Bueller’s Day Off* (1986) became iconic.**
* **The "Brat Pack" (actors like Molly Ringwald, Emilio Estevez, and Rob Lowe) became youth idols.**

### **6. Sci-Fi & Special Effects Boom**

* **Advancements in visual effects (VFX) led to groundbreaking sci-fi and fantasy films:**
  + ***E.T. the Extra-Terrestrial* (1982)**
  + ***Blade Runner* (1982)**
  + ***The Terminator* (1984)**
  + ***Aliens* (1986)**
* **Companies like Industrial Light & Magic (ILM) revolutionized special effects.**

### **7. Rise of Horror & Slasher Films**

* **The 1980s was a golden age for horror, especially slasher films:**
  + ***Friday the 13th* (1980) and its sequels**
  + ***A Nightmare on Elm Street* (1984)**
  + ***Halloween* sequels**
* **Horror franchises became highly profitable due to their low budgets and cult followings.**

### **8. Comedy Dominance**

* **Comedy legends like Eddie Murphy (*Beverly Hills Cop*), Bill Murray (*Ghostbusters*), and Chevy Chase (*National Lampoon’s Vacation*) became box office stars.**
* ***Airplane!* (1980) and *The Naked Gun* (1988) set the tone for spoof comedies.**

### **9. Musical & Dance Films**

* **The 1980s saw a surge in music-driven films, influenced by MTV and pop culture:**
  + ***Footloose* (1984)**
  + ***Flashdance* (1983)**
  + ***Dirty Dancing* (1987)**
  + ***Purple Rain* (1984)**

### **10. Independent & Art Films Gaining Ground**

* **While blockbusters dominated, independent filmmakers like the Coen Brothers (*Blood Simple*), David Lynch (*Blue Velvet*), and Spike Lee (*Do the Right Thing*) gained recognition.**
* **Miramax, founded in 1979, started growing as a distributor of indie films.**

### **Conclusion**

**The 1980s defined the modern Hollywood business model, with the dominance of franchises, home video, high-concept blockbusters, and action stars. It was an era of excess, innovation, and cultural influence that still resonates today.**

# Exercise 1.2 Compare and contrast the responses using Regenerate Button

**The 1980s was a transformative decade for Hollywood, marked by several key trends that shaped the film industry:**

### **1. Rise of Blockbusters & Franchise Films**

**Following the success of *Jaws* (1975) and *Star Wars* (1977), the blockbuster era truly took off in the '80s. Studios focused on high-concept films with broad appeal, leading to massive hits like:**

* ***Indiana Jones* series (*Raiders of the Lost Ark* - 1981)**
* ***E.T. the Extra-Terrestrial* (1982)**
* ***Ghostbusters* (1984)**
* ***Back to the Future* (1985)**
* ***Batman* (1989)**

**Franchises became a dominant force, ensuring sequels and merchandising opportunities.**

### **2. The Golden Age of Action Movies**

**The 1980s saw the rise of action stars and explosive set pieces, fueled by Cold War themes and high-energy storytelling. Key stars and films included:**

* **Arnold Schwarzenegger (*The Terminator*, *Predator*)**
* **Sylvester Stallone (*Rambo*, *Rocky III & IV*)**
* **Bruce Willis (*Die Hard*)**
* **Chuck Norris and Jean-Claude Van Damme (martial arts and military action films)**

### **3. The Birth of the Modern Teen Movie**

**Teen-oriented films flourished, with directors like John Hughes leading the way (*The Breakfast Club*, *Ferris Bueller’s Day Off*, *Sixteen Candles*). These films captured the angst, humor, and romance of youth culture.**

### **4. The Rise of Home Video & VHS Boom**

**The introduction of VHS and video rental stores (like Blockbuster) changed movie consumption. This created new revenue streams, allowing cult classics and B-movies to thrive. Direct-to-video movies also became common.**

### **5. Special Effects Revolution**

**Advancements in CGI and animatronics led to groundbreaking visuals, especially in sci-fi and fantasy films. Landmark films included:**

* ***Tron* (1982) – early CGI**
* ***The Terminator* (1984) – animatronics & practical effects**
* ***Who Framed Roger Rabbit* (1988) – blending live-action & animation**

### **6. The Expansion of Comedy**

**Comedy films took off, with stars like Eddie Murphy (*Beverly Hills Cop*, *Coming to America*), Bill Murray (*Ghostbusters*), and Chevy Chase (*National Lampoon’s Vacation*). Slapstick, satire, and raunchy humor became more common.**

### **7. Horror Boom & Slasher Films**

**The '80s saw an explosion of horror films, especially slasher franchises:**

* ***Friday the 13th* (1980)**
* ***A Nightmare on Elm Street* (1984)**
* ***The Evil Dead* (1981)**
* ***Hellraiser* (1987)**

**Low-budget horror became hugely profitable.**

### **8. Stronger Female Leads & Action Heroines**

**Hollywood started featuring stronger female protagonists:**

* **Sigourney Weaver as *Ripley* in *Aliens* (1986)**
* **Linda Hamilton as *Sarah Connor* in *The Terminator* (1984)**
* **Molly Ringwald in *teen movies***

### **9. The Influence of MTV & Pop Music in Films**

**With the rise of MTV (launched in 1981), films incorporated pop music and music video-style editing. Iconic soundtracks included:**

* ***Flashdance* (1983)**
* ***Top Gun* (1986)**
* ***Dirty Dancing* (1987)**

### **10. Rise of Independent Cinema**

**While Hollywood was dominated by blockbusters, indie films gained traction, setting the stage for the indie boom of the '90s. Key films included:**

* ***Sex, Lies, and Videotape* (1989)**
* ***Blue Velvet* (1986)**

**Overall, the 1980s cemented the blockbuster formula, emphasized spectacle, and introduced many enduring franchises and film styles that continue to influence cinema today.**

You can scroll through the different responses. Take a moment to compare and contrast. How are they the same? How are they different? Describe the differences between responses in your delivery document under Exercise 1.2

# Exercise 2.1 Create a Poem on topic of your Choice

**Write a poem about how a broke, homeless guy became a famous AI entrepreneur in Florida and now competes with Elon Musk.**

Ans>  
**From Streets to Silicon: The Rise of a Tech Titan**

Beneath neon flickers and moonlit despair,  
 A man with no fortune, no shelter, no care.  
 His pockets were empty, his dreams out of sight,  
 Yet hope whispered softly, "Rise up and fight."

A library corner, his refuge, his light,  
 Where code became magic deep into the night.  
 No laptop, no Wi-Fi, just books in his hand,  
 Blueprints of futures he dared to command.

Through shelters and struggle, through hunger and pain,  
 He studied the circuits that danced in his brain.  
 From Java to Python, from zeros to ones,  
 He whispered to AI like daughters and sons.

Then fate sent a signal, a chance to be seen,  
 A startup pitch meeting—a break in between.  
 With passion he spoke of a world redefined,  
 Where logic met kindness, where tech could be kind.

Investors once scoffed at his tattered old coat,  
 Till lines of his code kept their systems afloat.  
 His software was sharper, his vision was clear,  
 The world took him in, and the world took a cheer.

In Florida’s skyline, his towers now gleam,  
 A beacon of hope for those who still dream.  
 His AI built cities, it healed and it learned,  
 A fortune now his, yet his heart never turned.

Elon took notice, a challenger near,  
 A duel of the titans—innovation sincere.  
 Not rockets nor Teslas but minds in the ring,  
 A battle of futures—whose AI would sing?

Yet deep in his soul, he remembered the street,  
 The nights without shelter, the cold at his feet.  
 So he built not for riches, nor power, nor pride,  
 But for every lost dreamer with fire inside.

For tech is not metal, nor circuits, nor steel,  
 But the spark of the human, the will to reveal—  
 That genius can rise from the lowest of lows,  
 From sidewalks to stardust, where ambition still grows.

**!@#**

# Exercise 3.1 Translate to German

**PQL>**

**Translate the last response into German**

**Ans>**

**Die 1980er-Jahre waren ein transformatives Jahrzehnt für Hollywood, geprägt von mehreren wichtigen Trends, die die Filmindustrie beeinflussten:**

### **1. Aufstieg der Blockbuster & Filmreihen**

**Nach dem Erfolg von *Der weiße Hai* (1975) und *Krieg der Sterne* (1977) begann das Blockbuster-Zeitalter. Studios konzentrierten sich auf hochkonzeptionelle Filme mit breiter Anziehungskraft, was zu riesigen Hits führte wie:**

* ***Indiana Jones*-Reihe (*Jäger des verlorenen Schatzes* – 1981)**
* ***E.T. – Der Außerirdische* (1982)**
* ***Ghostbusters – Die Geisterjäger* (1984)**
* ***Zurück in die Zukunft* (1985)**
* ***Batman* (1989)**

**Filmreihen wurden zu einer dominierenden Kraft, was Fortsetzungen und Merchandising-Möglichkeiten sicherte.**

### **2. Das goldene Zeitalter der Actionfilme**

**Die 1980er sahen den Aufstieg von Actionstars und explosiven Inszenierungen, oft mit Kaltem-Krieg-Themen und energiegeladenen Erzählungen. Wichtige Stars und Filme:**

* **Arnold Schwarzenegger (*Terminator*, *Predator*)**
* **Sylvester Stallone (*Rambo*, *Rocky III & IV*)**
* **Bruce Willis (*Stirb langsam*)**
* **Chuck Norris und Jean-Claude Van Damme (Martial-Arts- und Militär-Actionfilme)**

### **3. Die Geburt des modernen Teenager-Films**

**Filme für Jugendliche florierten, mit Regisseuren wie John Hughes an der Spitze (*The Breakfast Club*, *Ferris macht blau*, *Sixteen Candles*). Diese Filme fingen die Ängste, den Humor und die Romantik der Jugendkultur ein.**

### **4. Aufstieg des Heimvideos & VHS-Boom**

**Die Einführung von VHS und Videotheken (wie Blockbuster) veränderte den Filmkonsum. Dies schuf neue Einnahmequellen und ließ Kultklassiker sowie B-Movies aufblühen. Auch Direct-to-Video-Filme wurden häufiger.**

### **5. Revolution der Spezialeffekte**

**Fortschritte in CGI und Animatronik führten zu bahnbrechenden visuellen Effekten, besonders in Science-Fiction- und Fantasyfilmen. Wegweisende Filme:**

* ***Tron* (1982) – frühe CGI-Nutzung**
* ***The Terminator* (1984) – Animatronik & praktische Effekte**
* ***Falsches Spiel mit Roger Rabbit* (1988) – Mischung aus Realfilm & Animation**

### **6. Expansion der Komödien**

**Komödienfilme boomten, mit Stars wie Eddie Murphy (*Beverly Hills Cop*, *Der Prinz aus Zamunda*), Bill Murray (*Ghostbusters*) und Chevy Chase (*Die schrillen Vier auf Achse*). Slapstick, Satire und anzüglicher Humor wurden populärer.**

### **7. Horror-Boom & Slasher-Filme**

**Die 80er erlebten eine Explosion von Horrorfilmen, insbesondere Slasher-Filmreihen:**

* ***Freitag der 13.* (1980)**
* ***A Nightmare on Elm Street* (1984)**
* ***Tanz der Teufel* (1981)**
* ***Hellraiser* (1987)**

**Günstig produzierte Horrorfilme wurden enorm profitabel.**

### **8. Stärkere weibliche Hauptfiguren & Actionheldinnen**

**Hollywood begann, stärkere weibliche Protagonistinnen zu präsentieren:**

* **Sigourney Weaver als *Ripley* in *Aliens* (1986)**
* **Linda Hamilton als *Sarah Connor* in *The Terminator* (1984)**
* **Molly Ringwald in *Teenager-Filmen***

### **9. Der Einfluss von MTV & Popmusik in Filmen**

**Mit dem Aufstieg von MTV (gestartet 1981) integrierten Filme vermehrt Popmusik und Musikvideo-ähnlichen Schnitt. Ikonische Soundtracks:**

* ***Flashdance* (1983)**
* ***Top Gun* (1986)**
* ***Dirty Dancing* (1987)**

### **10. Aufstieg des Independent-Kinos**

**Während Hollywood von Blockbustern dominiert wurde, gewannen Indie-Filme an Bedeutung und bereiteten den Boom der 90er vor. Wichtige Filme:**

* ***Sex, Lies, and Videotape* (1989)**
* ***Blue Velvet* (1986)**

**Insgesamt festigten die 1980er das Blockbuster-Format, setzten auf Spektakel und führten viele langlebige Filmreihen und Stile ein, die das Kino bis heute beeinflussen.**

**Go to Gemini dot Google dot com**

**Let’s get started. Gemini can be accessed as a web app by navigating to** [**gemini.google.com/app**](https://gemini.google.com/app)**.**

**Exercise: Historical Analysis**

**Prompt: Compare and contrast the economic policies of Franklin D. Roosevelt and Ronald Reagan.**

**Exercise 4.1 Prompt and Reply to compare FDR and Ronald Reagan**

**Output**

[**https://g.co/gemini/share/e7be45a14e3e**](https://g.co/gemini/share/e7be45a14e3e)

**Exercise: Scientific Inquiry**

**Prompt: Explain the theory of relativity in simple terms.**

**Put your input suggestion and response into your delivery document under Exercise 4.2**[**https://g.co/gemini/share/d301c12b7c9e**](https://g.co/gemini/share/d301c12b7c9e)

**Weather Forecast - Since Gemini has access to recent data, it can provide information we can use in our everyday life. Try it, we used "What are the most likely days for rain in the next week in Lealman, Florida" - Put your input prompt and response into your delivery document under Exercise 5.1**

# Exercise 5.1 Everyday Life

**Prompt>**

**What are the precautions I should take if a Hurricane is approaching in FLorida?**

**Ans>**

**Hurricanes are a serious threat in Florida, so it's crucial to be prepared.1 Here's a breakdown of essential precautions:**

**Before the Hurricane:**

* **Develop a Family Emergency Plan:**
  + **Establish meeting points and communication strategies.**
  + **Ensure everyone knows evacuation routes.**
* **Gather Emergency Supplies:**
  + **Water: One gallon per person per day (at least a 3-day supply).2**
  + **Food: Non-perishable items, canned goods, and a manual can opener.3**
  + **First-aid kit: Include medications, bandages, and antiseptic.4**
  + **Flashlights and batteries: Extra batteries for all devices.5**
  + **Battery-powered or hand-crank radio: To receive weather updates.6**
  + **Important documents: Waterproof container for insurance papers, IDs, and medical records.7**
  + **Cash: ATMs may be unavailable after the storm.8**
  + **Pet supplies: Food, water, and medications for your pets.**
* **Secure Your Home:**
  + **Install hurricane shutters or board up windows.9**
  + **Reinforce garage doors.10**
  + **Trim trees and shrubs.11**
  + **Bring in outdoor furniture and loose objects.12**
* **Stay Informed:**
  + **Monitor weather forecasts from reliable sources like the National Hurricane Center and local news.**
  + **Pay attention to evacuation orders from local authorities.13**
* **Prepare Your Vehicle:**
  + **Fill your gas tank.14**
  + **Ensure your vehicle is in good working condition.15**
* **Know your evacuation zone:**
  + **Florida has evacuation zones, and it is very important to know which zone you live in.16**

**During the Hurricane:**

* **Stay Indoors:**
  + **Seek shelter in a small, interior room on the lowest level of your home.**
  + **Stay away from windows and glass doors.**
* **Avoid Flooded Areas:**
  + **Do not walk or drive through floodwaters.17**
* **Listen for Alerts:**
  + **Continue to monitor weather updates and follow instructions from authorities.**
* **Limit electronics usage:**
  + **Conserve battery life on mobile devices.18**

**After the Hurricane:**

* **Stay Inside:**
  + **Wait for the "all clear" from authorities before leaving your shelter.19**
* **Avoid Downed Power Lines:**
  + **Stay away from any fallen power lines.20**
* **Beware of Flooding:**
  + **Floodwaters may be contaminated and contain hidden hazards.21**
* **Document Damage:**
  + **Take photos and videos of any damage for insurance claims.22**
* **Be aware of carbon monoxide dangers:**
  + **If using a generator, use it outside, away from windows and doors.23**

**Key Resources:**

* **Florida Division of Emergency Management: floridadisaster.org24**
* **National Hurricane Center: nhc.noaa.gov25**
* **Florida Department of Health: floridahealth.gov26**

**By taking these precautions, you can significantly increase your safety during a hurricane.**

# Exercise 5.2 Current Events

**Current Events - You can create a news feed tailored to your liking. We used "Summarize yesterday’s results from the NBA. Then give me the top ten news headlines from around the world" - Put your input prompt and response into your delivery document under Exercise 5.2**

# Exercise 5.2 Current Events in Technology space

**Prompt>**

**Summarize last week’s major advancements in the field of AI. Then give me the top 10 people in AI who made the headlines along with their company websites**

**Ans>**

**It's clear that the AI field is rapidly evolving, with significant advancements occurring frequently. Here's a summary of recent major developments, focusing on prominent trends:**

**Key AI Advancements:**

* **Nvidia's Dominance and AI Chip Advancements:**
  + **Nvidia's surge in sales due to the high demand for its AI chips, particularly the Blackwell series, highlights the critical role of hardware in AI development.**
  + **The focus is on increased computing power for training more advanced AI models, and for enabling more advanced "reasoning AI".**
* **Large Language Model (LLM) Improvements:**
  + **Continued improvements in LLMs, with a focus on enhancing reasoning abilities, accuracy, and reducing "hallucinations" (generating false information).**
  + **The emergence of cost-effective LLMs, like those developed by DeepSeek, is democratizing access to powerful AI.**
* **Agentic AI and Robotics:**
  + **The rise of "agentic AI" and "physical AI" is paving the way for AI-powered robots and autonomous systems that can interact with the real world.**
  + **Development in robotics, with things like collective robot behavior, and more advanced robot navigation, are progressing quickly.**
* **AI in Diverse Applications:**
  + **AI is being applied in a wide range of fields, including healthcare (AI agents for patient services), scientific research (decoding animal emotions, analyzing complex systems), and creative endeavors (AI-generated games, music creation).**
* **Open Source AI progress:**
  + **Companies like Google are releasing more open source AI models, like the Gemma family of models, to promote wider development, and research.**

**Top AI Figures Making Headlines:**

**It's important to note that "top 10" lists can be subjective, and the AI landscape is constantly changing. However, here are some key figures who have been prominent in recent news, along with their associated companies:**

* **Jensen Huang (Nvidia):**
  + **Website: nvidia.com**
  + **As CEO, he's at the forefront of the hardware revolution driving AI.**
* **Sam Altman (OpenAI):**
  + **Website: openai.com**
  + **Leading the development of cutting-edge LLMs like GPT models.**
* **Sundar Pichai (Google/Alphabet):**
  + **Website: abc.xyz**
  + **Overseeing Google's extensive AI research and product development, including Gemini.**
* **Demis Hassabis (Google DeepMind):**
  + **Website: deepmind.google**
  + **Leading DeepMind's groundbreaking AI research.**
* **It is difficult to give a definitive top ten list, as many people are working in AI, and many of those people work in teams. So instead of individual people, I will add some of the top companies that are making headlines.**
* **DeepSeek:**
  + **deepseek.com**
  + **Making waves with very cost effective LLM's.**
* **Microsoft:**
  + **microsoft.com**
  + **A major investor in, and partner with, OpenAI, and a large developer of its own AI technologies.**
* **Amazon:**
  + **amazon.com**
  + **Developing its own AI technology, and implementing AI into its cloud services.**
* **Meta:**
  + **meta.com**
  + **Developing AI for use in its social media platforms, and also developing open source AI models.**
* **Apple:**
  + **apple.com**
  + **Increasingly implementing AI into its devices and software.**
* **Tesla:**
  + **tesla.com**
  + **Developing AI for self driving technology, and robotics.**

**It's important to keep in mind that the AI field is highly collaborative, and many advancements are the result of teamwork and contributions from numerous researchers and engineers.**

# Exercise 5.3 Modify Response

# Put your input response into your delivery document under Exercise 5.3

**Sorry, my Gemini window does not seem to have this Button for Modify Response**

**!@#**

**Marker**

# Microsoft CoPilot Section

# Microsoft Copilot AI is a suite of artificial intelligence-powered tools that can help you with your research, learning, and other tasks. Microsoft Copilot AI is an extension of Microsoft’s search engine, Microsoft Copilot, and it uses natural language processing and machine learning algorithms to provide users with more accurate and relevant search results. The tool is powered by a next-generation OpenAI large language model that is more powerful than ChatGPT and customized specifically for search.

**Navigate to** [**copilot.microsoft.com**](https://codeboxx.docebosaas.com/lms/copilot.microsoft.com)**. To use Copilot, you'll need to create an account, and please note that the free version may have a prompt limit, so use prompts judiciously.**

**https://codeboxx.docebosaas.com/lms/copilot.microsoft.com**

**Should be:**

[**copilot.microsoft.com**](http://copilot.microsoft.com)

**GitHub**

[**www.github.com**](http://www.github.com)

**GH CoPilot**

# Exercise 6.1 Describe a Typical Day at work for a Pharma Quality Engineer involved with a CDMO company

**Ans>  
It looks like you have two different requests here. Let's tackle them one by one!  
(Note: Deleted the first one that was about Python)**

### **Typical Day for a Pharma Quality Engineer at a CDMO Company**

**A typical day for a Pharma Quality Engineer involved with a Contract Development and Manufacturing Organization (CDMO) might look like this:**

1. **Morning Briefing: Start the day with a team meeting to discuss ongoing projects, any issues from the previous day, and priorities for the day.**
2. **Documentation Review: Review and approve batch records, validation protocols, and other quality-related documents to ensure compliance with regulatory standards.**
3. **Quality Control: Oversee the quality control processes, including sampling, testing, and inspection of raw materials, in-process materials, and finished products.**
4. **Audits and Inspections: Prepare for and participate in internal and external audits and inspections. This includes ensuring all documentation is up-to-date and addressing any findings from previous audits.**
5. **Problem-Solving: Address any quality issues that arise during production. This may involve root cause analysis, implementing corrective actions, and working with other departments to resolve issues.**
6. **Training: Conduct training sessions for staff on quality standards, procedures, and best practices to ensure everyone is up-to-date with the latest regulations and company policies.**
7. **Meetings with Clients: Engage with clients to discuss their quality requirements, provide updates on their projects, and address any concerns they may have.**
8. **Continuous Improvement: Work on continuous improvement projects to enhance the quality systems and processes within the organization.**
9. **End-of-Day Reporting: Summarize the day's activities, document any issues encountered, and plan for the next day's tasks.**

**This is a general overview, and the specific tasks can vary depending on the company's size, the products being manufactured, and the regulatory environment. Does this help with what you were looking for?**

**Analysis: Consider the level of detail, creativity, and clarity in the response. Write a brief summary on how Copilot's answer can be used as a basis for creative writing. Put the response in your delivery document under Exercise 6.1**

**Quite simply, we live in a world where one has to pick up new skills from every job assignment. I just finished a 5 month engagement at a CDMO company in my area and I now have to add a new section to my resume. So, in that sense this would be creative writing, since writing a resume involves some level of creativity and one has to be able to summarize all of their job details. I think this could be very useful in HR type of environments where HR has to write “A Day in the Life of a Quality Engineer” for example.**

# Exercise 6.2, What are the Key Impacts of Micro Plastics on Ocean Pollution?

Ans>  
Microplastics, tiny plastic particles less than 5 millimeters in size, have become a significant environmental concern due to their pervasive presence in the oceans. Here are some key impacts of microplastics on ocean pollution:

1. **Harm to Marine Life**: Microplastics are often ingested by marine animals, including fish, birds, and mammals. This ingestion can lead to physical harm, such as internal injuries and blockages, and can also introduce toxic chemicals into their bodies[[1]](https://oceaninfo.com/ocean/conservation/microplastics-in-the-ocean/)[[2]](https://www.unep.org/news-and-stories/story/microplastics-long-legacy-left-behind-plastic-pollution).
2. **Disruption of Food Chains**: When marine organisms consume microplastics, these particles can accumulate up the food chain, eventually reaching humans. This bioaccumulation can have unknown health impacts on both marine life and humans[[3]](https://oceanliteracy.unesco.org/plastic-pollution-ocean/).
3. **Chemical Pollution**: Microplastics can absorb and concentrate harmful chemicals from the surrounding water. When ingested by marine organisms, these chemicals can cause various health issues, including hormonal disruptions and reproductive problems[[2]](https://www.unep.org/news-and-stories/story/microplastics-long-legacy-left-behind-plastic-pollution).
4. **Habitat Degradation**: Microplastics can settle on the ocean floor, affecting benthic organisms and altering the physical and chemical properties of marine habitats. This can disrupt the ecosystems and the species that rely on them[[1]](https://oceaninfo.com/ocean/conservation/microplastics-in-the-ocean/).
5. **Economic Impact**: The presence of microplastics in the ocean can affect industries such as fisheries and tourism. Contaminated seafood can lead to economic losses, and polluted beaches can deter tourists[[3]](https://oceanliteracy.unesco.org/plastic-pollution-ocean/).
6. **Long-Term Environmental Impact**: Microplastics are highly persistent in the environment and can take hundreds of years to degrade. Their long-term presence in the ocean continues to pose a threat to marine ecosystems and biodiversity[[3]](https://oceanliteracy.unesco.org/plastic-pollution-ocean/).

Addressing the issue of microplastics requires global cooperation and efforts to reduce plastic production, improve waste management, and promote sustainable practices. If you have any more questions or need further details, feel free to ask!

**Analysis: Evaluate the comprehensiveness and accuracy of the information. Write a brief summary on how Copilot can assist in gathering and summarizing research data. Put the response in your delivery document under Exercise 6.2**

**Summary  
CoPilot can help in summaring and presenting facts very well. It provides concise answers in easily readable and understandable format. The results can be used by anyone who needs research data when making important life decisions like buying a car.**

References

[1] [Microplastics in the Ocean: A Big Growing Concern](https://oceaninfo.com/ocean/conservation/microplastics-in-the-ocean/)

[2] [Microplastics: The long legacy left behind by plastic pollution - UNEP](https://www.unep.org/news-and-stories/story/microplastics-long-legacy-left-behind-plastic-pollution)

[3] [Ocean plastic pollution an overview: data and statistics - UNESCO](https://oceanliteracy.unesco.org/plastic-pollution-ocean/)

# Summary of Business Document

Summary This document outlines the requirements for Module 1 of the CodeBoxx Applied AI curriculum. In this module, candidates will first explore AI tools from a user perspective, as well as from a developer perspective. Objectives ● Familiarization with LLM tools from a user perspective ● Familiarization with Prompt Engineering ● Introduction to AI tools for developers Requirements Before we dive into the content, let’s set up the necessary tools. 1. Install Acaconda– A powerful package manager that simplifies managing Python libraries and environments. 2. (Optional) Set up Visual Studio Code (VS Code), a versatile and lightweight code editor that enhances coding, debugging, and file management. While Anaconda covers all required tasks, using VS Code is a matter of preference. 3. Clone the CodeBoxx AI Toolkit repository at https://github.com/Gamikaru/codeboxx-aai-student-lab 4. Create your own repository on GitHub, using the previous repository as the base you’ll be working on. 5. Insert the link to your repository at the bottom of this document, in the Deliverables section. Part 1: Introduction to AI tools and Prompt Engineering Instructions: Provide your answers, and if applicable, any images and/or links required for the exercises. Once finished, upload the completed document to the submission area of the deliverable(s) section. Student Name: [Enter your name here] Exercise 1.1 Replace this with your answers, and, if applicable, any images or links Exercise 1.2 Replace this with your answers, and, if applicable, any images or links Exercise 2.1 Replace this with your answers, and, if applicable, any images or links Exercise 3.1 Replace this with your answers, and, if applicable, any images or links Exercise 4.1 Replace this with your answers, and, if applicable, any images or links Exercise 4.2 Replace this with your answers, and, if applicable, any images or links Exercise 5.1 Replace this with your answers, and, if applicable, any images or links Exercise 5.2 Replace this with your answers, and, if applicable, any images or links Exercise 5.3 Replace this with your answers, and, if applicable, any images or links Exercise 5.4 Replace this with your answers, and, if applicable, any images or links Exercise 6.1 Replace this with your answers, and, if applicable, any images or links Exercise 6.2 Replace this with your answers, and, if applicable, any images or links Exercise 6.3 Replace this with your answers, and, if applicable, any images or links Exercise 7.1 Replace this with your answers, and, if applicable, any images or links Exercise 8.1 Replace this with your answers, and, if applicable, any images or links Exercise 8.2 Replace this with your answers, and, if applicable, any images or links Exercise 8.3 Replace this with your answers, and, if applicable, any images or links Exercise 8.4 Replace this with your answers, and, if applicable, any images or links Exercise 8.5 Replace this with your answers, and, if applicable, any images or links Exercise 8.6 Replace this with your answers, and, if applicable, any images or links Exercise 8.7 Replace this with your answers, and, if applicable, any images or links Exercise 8.8 Replace this with your answers, and, if applicable, any images or links Exercise 8.9 Replace this with your answers, and, if applicable, any images or links Exercise 8.10 Replace this with your answers, and, if applicable, any images or links Exercise 9.1 Replace this with your answers, and, if applicable, any images or links Part 2: Introduction to AI tools for Developers This part of the module introduces foundational tools for data manipulation and analysis. Setup 1. Access the Repository a. Visit the CodeBoxx AI Toolkit repository at https://github.com/Gamikaru/codeboxx-aai-student-lab b. Take time to read through the README first to understand the repository structure 2. If not already done, clone the repository 3. If not already done, create your own repository on GitHub, using the cloned repository as the base you’ll be working on. 4. Launch Jupyter Lab a. Activate your conda environment if you have one by typing conda activate your-environment-name b. Start Jupyter Lab in the repository directory by typing jupyter lab 5. Navigate the Notebooks a. In your browser, Jupyter Lab will open automatically. If it doesn’t, paste the links provided after you ran jupyter lab into your browser. b. Use the file browser on the left to navigate to the appropriate module folder Exercises and Datasets Below is a list of exercises and datasets you'll need. Refer to the Approach section for guidance on how to proceed. 1. Pandas Tutorials (AAI-101/notebooks/tutorials/) a. Work through these 10 Sequential Notebooks in order: i. 1\_pandas\_intro.ipynb - Basic DataFrame operations ii. 2\_read\_and\_write\_tabular\_data.ipynb - Importing and exporting data iii. 3\_selecting\_a\_subset\_of\_df.ipynb - Data filtering and selection iv. 4\_creating\_plots.ipynb - Basic data visualization v. 5\_new\_cols\_from\_existing\_cols.ipynb - Data transformation vi. 6\_calculating\_statistics.ipynb - Statistical operations vii. 7\_table\_reshaping.ipynb - Reshaping data (pivot, melt) viii. 8\_combining\_dataframes.ipynb - Merging and joining datasets ix. 9\_handling\_time\_series\_data.ipynb - Time series analysis x. 10\_manipulating\_textual\_data.ipynb - Text manipulation 2. Practice Worksheets (AAI-101/notebooks/worksheets/) a. challenges\_101.ipynb - Practical challenges using student enrollment data b. further\_challenges\_101.ipynb - Additional practice problems using a dataset of your choice! 3. Datasets (AAI-101/data/ and AAI-101/air\_quality\_datasets/) a. Student and enrollment data (students.csv, enrollments.json) b. Titanic passenger data (titanic.csv) c. Air quality datasets (various CSV files) Approach 1. Start with the Basics: ○ Begin with the tutorial notebooks in numerical order ○ Execute each cell and observe the results ○ Modify parameters to deepen your understanding 2. Practice What You've Learned: ○ After completing the tutorials, tackle the challenges in challenges\_101.ipynb ○ These exercises mirror real-world data tasks ○ Use the provided datasets to complete the exercises 3. Apply to Your Own Projects: ○ For further\_challenges\_101.ipynb, find a dataset that interests you ○ Apply the techniques you've learned to analyze this new dataset Deliverables A zip file containing ● This document, containing ○ The answers to part 1 questions ○ A link to your GitHub repository containing your completed notebooks and datasets. Ensure your project maintains the same folder and file structure as the cloned repository. ○ GitHub link: Make sure to use only the 'Upload a File' option to submit your deliverables.