**프롬프트**

Generate four diverse multiple-choice questions based on the given concept:

concept: [1종 오류와 2종 오류 ▪ 늑대와 양치기 소년 • 처음에는 늑대가 없는데도 “늑대가 나타났어요!”라는 말에 마을 사람들이 달려감 • 두 번째도 늑대가 없는데도 “늑대가 나타났어요!”라는 말에 마을 사람들이 달려감 • 세 번째는 늑대가 나타났는데도 “늑대가 나타났어요!”라는 말을 마을 사람들이 믿지 않음 →마을 사람들은 세 번의 판단을 했고, 세 번 다 틀림 ▪ 귀무가설과 대립가설 • 대립가설(alternative hypothesis): 데이터를 보고, 기존과 특별한 차이(평균이 다르다거나)가 있다고 생각하는 가설 • 귀무가설(null hypothesis): 기존과 특별한 차이가 없다고 생각하는 가설 • 마을 사람들이 양치기 소년의 듣고, ‘늑대가 있다’라고 생각하는 것이 대립가설, ‘늑대가 없다’라고 생각하는 것이 귀무가설이 됨 ▪ 마을 사람들의 오류 • 첫 번째와 두 번째 경우: 늑대가 있다(positive)고 예측했는데 틀림(실제는 negative) → 1종 오류 (Type I error), 오경보(false alarm) • 세 번째 경우: 늑대가 없다(negative)라고 예측했는데 틀림(실제는 positive) → 2종 오류(Type II error), 탐지 누락(missed detection) • 통계학의 p-value는 1종 오류의 확률로 정의]

Please ensure that the questions cover different aspects of the provided text and vary in complexity. Additionally, provide only one answer corresponding to one of the questions. Thank you!

**결과**

1. What is the primary difference between Type I and Type II errors in hypothesis testing?

a) Type I error occurs when the null hypothesis is rejected incorrectly, while Type II error occurs when the null hypothesis is accepted incorrectly.

b) Type I error occurs when the alternative hypothesis is rejected incorrectly, while Type II error occurs when the alternative hypothesis is accepted incorrectly.

c) Type I error occurs when the sample size is too small, while Type II error occurs when the sample size is too large.

d) Type I error occurs when the significance level is too high, while Type II error occurs when the significance level is too low.

**Correct answer:** a) Type I error occurs when the null hypothesis is rejected incorrectly, while Type II error occurs when the null hypothesis is accepted incorrectly.

1. In the context of the "Boy Who Cried Wolf" scenario, what hypothesis would represent the belief that there is a wolf present?

a) Null hypothesis

b) Alternative hypothesis

c) Type I hypothesis

d) Type II hypothesis

**Correct answer:** b) Alternative hypothesis

1. Which scenario in the "Boy Who Cried Wolf" story corresponds to a Type II error?

a) When the villagers rush to the scene despite there being no wolf present.

b) When the villagers ignore the boy's warning, and a wolf is indeed present. c) When the villagers ignore the boy's warning, and there is no wolf present. d) When the villagers rush to the scene, and there is indeed a wolf present.

**Correct answer:** c) When the villagers ignore the boy's warning, and there is no wolf present.

1. How is the p-value defined in statistics?

a) It represents the probability of committing a Type I error.

b) It represents the probability of committing a Type II error.

c) It represents the probability of obtaining a test statistic as extreme as, or more extreme than, the observed value under the assumption that the null hypothesis is true.

d) It represents the probability of obtaining a test statistic as extreme as, or less extreme than, the observed value under the assumption that the null hypothesis is false.

**Correct answer:** c) It represents the probability of obtaining a test statistic as extreme as, or more extreme than, the observed value under the assumption that the null hypothesis is true.

**Streamlit  
텍스트, 스크린샷, 소프트웨어, 멀티미디어 소프트웨어이(가) 표시된 사진

자동 생성된 설명**

RateLimitError : 유료 사용자가 아닐 시 발생.

**Code** (openai api = 0.28)

)import openai  
import streamlit as st  
  
  
openai.api\_key = ""  
  
article\_text = st.text\_area("텍스트를 입력하십시오.")  
  
output\_size = st.radio( label = "문제의 길이를 설정하십시오.",  
 options= ["1문제", "2 문제", "3 문제"]  
 )  
  
if output\_size == "To-The-Point":  
 out\_token = 50  
elif output\_size == "Concise":  
 out\_token = 128  
else:  
 out\_token = 516  
  
  
if len(article\_text)<100:  
 st.warning("문제를 생성하기에 단어가 충분하지 않습니다.")  
  
if st.button("문제 생성", type='primary'):  
  
 response = openai.Completion.create(  
 engine="gpt-3.5-turbo-instruct",  
 prompt="Generate four diverse multiple-choice questions based on the given concept. concept:" + article\_text + "Please ensure that the questions cover different aspects of the provided text and vary in complexity. Additionally, provide only one answer corresponding to one of the questions. Thank you!",  
 max\_tokens=out\_token,  
 temperature=0.5)  
  
 res = response["choices"][0]["text"]  
 st.success(res)

**제안**

프롬프트에 “IN KOREAN.” 을 추가하면 생성하는 문제의 품질이 상당히 저하되었습니다.

1. 따라서 영어로 생성 후, 한국어로 번역을 하거나,
2. 처음부터 한국어로 잘 생성하는 프롬프트 메시지를 찾아야 할 것 같습니다.