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import pandas as pd
import scipy.stats as stats
import numpy as np

def load_reviews(file_path):
    try:
        df = pd.read_csv(file_path)
        if 'category' not in df.columns or 'rating' not in df.columns:
            raise ValueError("CSV must contain 'category' and 'rating' columns.")
        return df
    except Exception as e:
        print(f"Error loading file: {e}")
        return pd.DataFrame()

def calculate_confidence_interval(data, confidence=0.95):
    ratings = data['rating'].dropna()
    n = len(ratings)
    mean = ratings.mean()
    std_err = stats.sem(ratings)
    h = std_err * stats.t.ppf((1 + confidence) / 2, df=n - 1)
    return mean, (mean - h, mean + h)

if __name__ == "__main__":
    file_path = (r'C:\Users\91637\OneDrive\Desktop\sev\reviews2.csv')
    df = load_reviews(file_path)

    if df.empty:
        print("No data found.")
    else:
        category = input("Enter product category to analyze: ").strip()
        confidence_level = float(input("Enter confidence level (e.g., 0.95): "))

        filtered_data = df[df['category'].str.lower() == category.lower()]
        if filtered_data.empty:
            print("No reviews found for this category.")
        else:
            mean_rating, conf_interval = calculate_confidence_interval(filtered_data, confidence_level)
            print(f"\nSample Mean Rating: {mean_rating:.2f}")
            print(f"{int(confidence_level*100)}% Confidence Interval: ({conf_interval[0]:.2f}, {conf_interval[1]:.2f})")

```

Enter product category to analyze: electronics
Enter confidence level (e.g., 0.95): 0.95

Sample Mean Rating: 3.97
95% Confidence Interval: (3.20, 4.73)