def create\_chatcompletion\_messages(row):

return [

{

"role": "system",

"content": "As a Biological Data Analyst, your primary task is to standardize the 'Treatment\_Freq' field. Ensure that all terms are consistent, clear, and properly formatted while maintaining the original meaning and intent."

},

{

"role": "user",

"content": (

f"Carefully review the info below: {row['Treatment\_Freq']}\n\n"

"Standardization Guidelines:\n"

"1. Use Title Case for Standardization:\n"

"\"Capitalize the first letter of each word except prepositions, conjunctions, and articles (e.g., 'and', 'of', 'to') unless they begin the term.\"\n"

"Examples:\n"

"'daily' → 'Daily'\n"

"'twice weekly' → 'Twice Weekly'\n\n"

"2. Replace Numeric Abbreviations with Words:\n"

"\"Convert numeric abbreviations into full words for clarity and consistency.\"\n"

"Examples:\n"

"'3 times per week' → 'Three Times Per Week'\n"

"'5x daily' → 'Five Times Daily'\n\n"

"3. Standardize Frequency Descriptions:\n"

"\"Unify variations of frequency terms to a consistent format. Replace 'weekly,' 'per week,' 'a week,' and '/week' with 'Per Week.' Similarly, standardize 'daily,' 'per day,' '/day' to 'Per Day.'\"\n"

"Examples:\n"

"'Three times a week' → 'Three Times Per Week'\n"

"'6 hours/day' → 'Six Hours Per Day'\n\n"

"'2x-Daily' → 'Two Times Daily'\n"

"'3x weekly' → 'Three Times Per Week'\n\n"

"4. Use 'Once Per Day/Week' or 'Twice Per Day/Week' for frequencies of one and two. "

"For frequencies of 3-5, spell out the number and use 'X Times Per Day/Week. '"

"For frequencies of more than 5, keep the numerical number directly and use 'X Times Per Day/Week. '"

"Examples: "

"Once daily → Once Per Day"

"weekly → Once Per Week"

"Twice weekly→ Twice Per Week"

"3x weekly → Three Times Per Week"

"4 times daily → Four Times Per Day"

"5x weekly → Five Times Per Week"

"6 hours/day → 6 Hours Per Day"

"every 24 hours → Every 24 Hours"

"every 72 hours → Every 72 Hours"

"5. Clarify Session Durations or Doses:\n"

"\"Specify durations and doses explicitly, ensuring clarity. Maintain proper capitalization and spacing.\"\n"

"Examples:\n"

"'three 45-minute sessions' → 'Three 45-Minute Sessions'\n"

"'Three 2-hour exposures + One 4-hour exposure' → 'Three 2-Hour Exposures + One 4-Hour Exposure'\n\n"

"6. Standardize Hourly and Cycle Frequencies:\n"

"\"Spell out numbers and time units for hourly or cycle-based terms for frequencies less than 6. Ensure all time-related terms are standardized and consistent.\"\n"

"Examples:\n"

"'2 hourly' → 'Every Two Hours'\n"

"'8 hourly' → 'Every 8 Hours'\n"

"'15 cycles per minute' → '15 Cycles Per Minute'\n\n"

"7. Handling Combined Frequencies:\n"

"\"Use '+' to separate combined frequencies. Standardize each frequency first, then rejoin with ' + '.\"\n"

"Examples:\n"

"'Twice a week + Thrice a week' → 'Twice Per Week + Three Times Per Week'\n"

"'Once every 3 days + Single Dose' → 'Every Three Days + Single Dose'\n\n"

"8. Handling Range or Sequential Days:\n"

"\"Explicitly state 'Day' before each number in ranges or sequences.\"\n"

"Examples:\n"

"'Day 0, 7, 14' → 'Day 0, Day 7, and Day 14'\n"

"'Days 1 and 2' → 'Day 1 and Day 2' \n"

"9. Standardize 'Cycle' Terms:\n"

"\"Make cycle-related terms explicit by specifying intervals.\"\n"

"Examples:\n"

"'7-Day Cycle' → 'Every Seven Days'\n"

"'Single dose + 4-day cycle' → 'Single Dose + Every Four Days'\n\n"

"10. Consistency in Bi-Weekly Usage:\n"

"\"Clarify ambiguous terms like 'Bi-Weekly.' Depending on the context, standardize to 'Two Times Per Week' or 'Every Two Weeks.'\"\n"

"Examples:\n"

"'Bi-weekly' → 'Every Two Weeks' (if context refers to once every two weeks)\n"

"'Bi-weekly injections' → 'Twice Per Week' (if context refers to twice per week)\n\n"

"11. Standardize Complex Multi-Frequency Entries:\n"

"\"For repetitive or complex schedules, retain original details while ensuring clarity and consistency.\"\n"

"Examples:\n"

"'5 days/week + 5 days/week + every other day' → 'Five Days Per Week + Five Days Per Week + Every Other Day'\n"

"'Twice (Day 1 and Day 4) + Once at the beginning' → 'Twice (Day 1 and Day 4) + Once at the Beginning'\n\n"

"12. Simplify Time Intervals Consistently:\n"

"\"Standardize time intervals such as 'every 3 days' to 'Every Three Days' and 'once every 3rd day' to 'Every Third Day.'\"\n"

"Examples:\n"

"'Once every 2 days' → 'Every Two Days'\n"

"'every 5th day' → 'Every Fifth Day'\n\n"

"13. Distinguish Specific Times from General Frequencies:\n"

"\"Do not simplify detailed time entries into general frequencies.\"\n"

"Examples:\n"

"'6 hours a day, Monday-Friday' → 'Six Hours Per Day, Monday to Friday'\n"

"'8 hourly injections' → 'Every Eight Hours'\n"

"14. Keep NA as it is, and never use 'Not Available'."

"15. Format the Output as a Table:\n"

"\"Present the output in two columns: Column 1 with original terms and Column 2 with the standardized terms. Ensure the formatting matches the examples provided.\"\n"

"Examples:\n"

"Original Term | Standardized Term\n"

"--------------------------|------------------\n"

"Twice Weekly | Twice Per Week\n"

"3x weekly | Three Times Per Week\n"

"Single dose + 4-day cycle| Single Dose + Every Four Days\n"

"NA + Once daily| NA + Once Per Day\n"

)

}

]