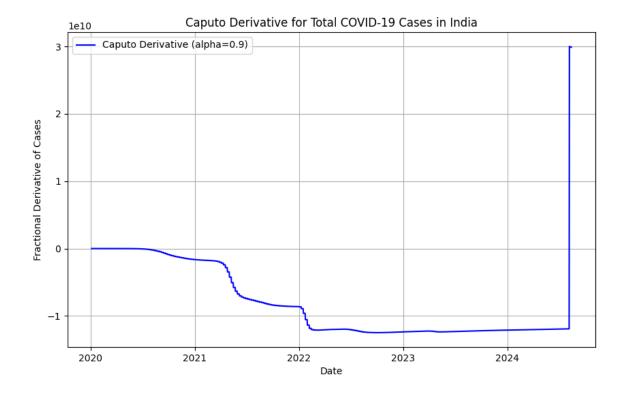
### **COVID-19 in India: Caputo Derivative Analysis**

This report analyzes the COVID-19 cases in India using a Caputo fractional derivative model. The analysis includes total cases, vaccinations, cases by gender, and age group, all modeled using fractional derivatives to consider the memory effects in the system.

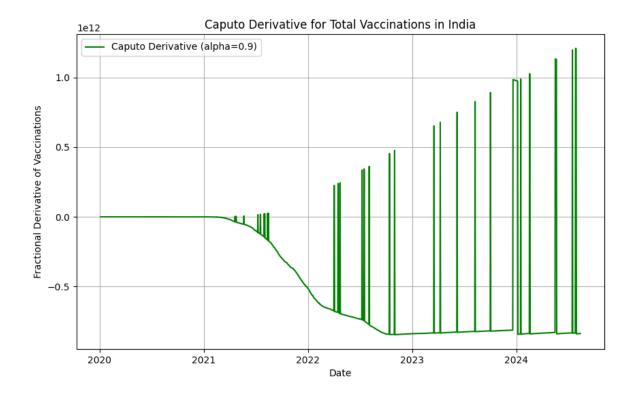
### 1. Caputo Derivative Data Analysis

The following figures represent the Caputo derivative analysis of COVID-19 data in India, including total cases, vaccinations, cases by gender, and age group.

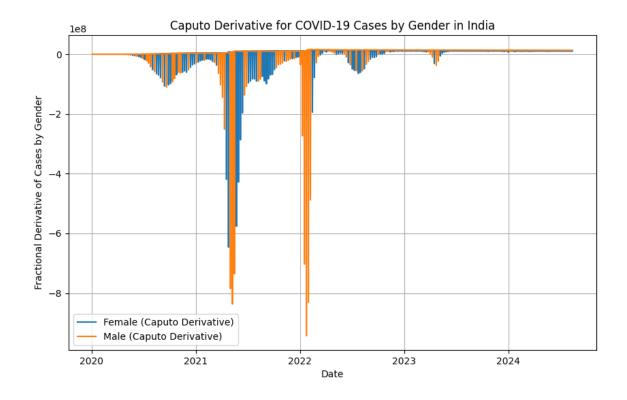
# **Caputo Derivative for Total COVID-19 Cases**



# **Caputo Derivative for Total Vaccinations**



# Caputo Derivative for COVID-19 Cases by Gender



# Caputo Derivative for COVID-19 Cases by Age Group

