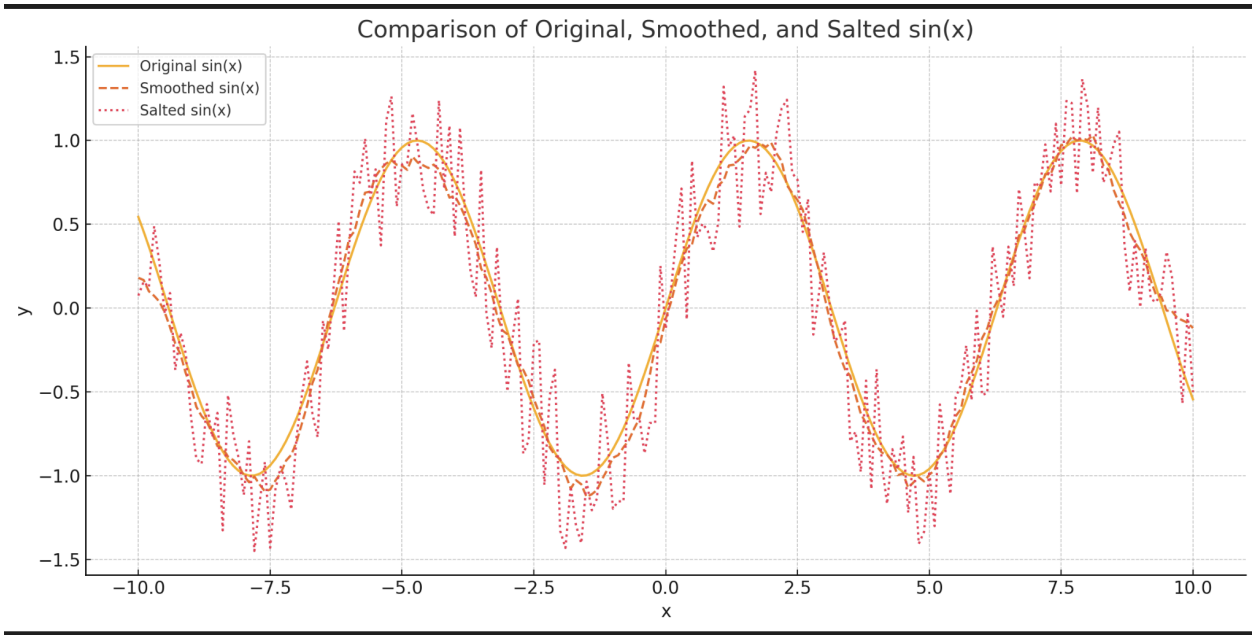
Original Salter Smoother and Plotter writeup

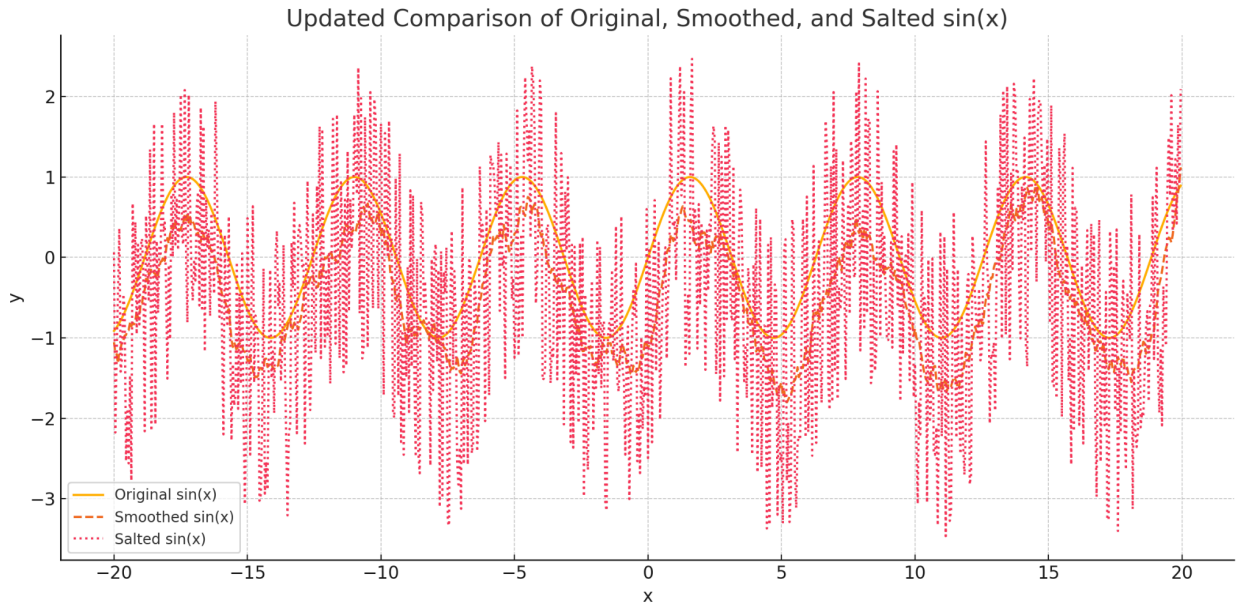
These graphs show how changing different parameters like salt strength, step size, and smoothing window affected the way the final result looked. Each version used the same base function, but with different settings applied to it. The goal was to see how much each change impacted the shape — whether it made the graph messier or helped clean it up. This write-up goes over what changed between each version and what those changes did to the overall look of the output.



Parameters set :
X = -10, x <= 10, x = x+= 0.1
Salter min -0.5, 0.5
Smoother 10

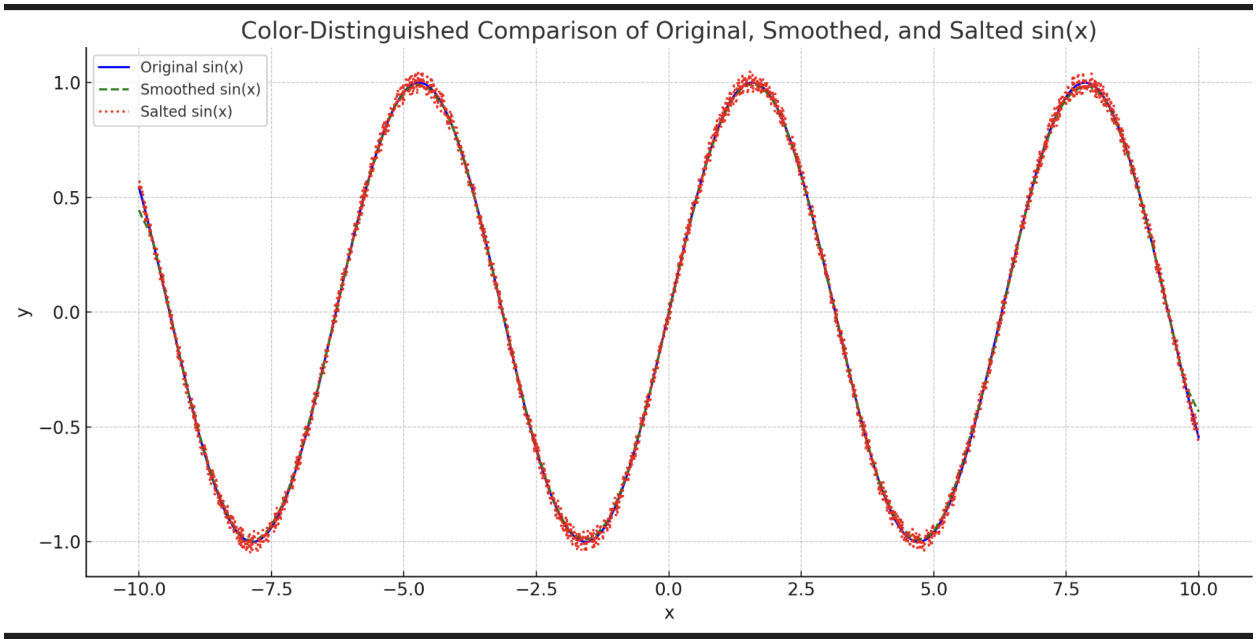
This setup produced a medium-noise result. The salt introduced visible distortion to the curve, but it wasn't overwhelming. The smoothing filter (window size 10) was strong enough to bring the signal mostly back to its original form without completely flattening the shape. This felt like a balanced middle ground.

Original Salter Smoother and Plotter writeup



Parameters set :
X = - 20, x <= 20, x+= 0.05
Salter min -2.5, max 1.5
Smoother = 10

The wider x range created a longer signal, and the noise was much more intense due to the wider salt range. Peaks and valleys were heavily distorted. Even though the smoother window stayed at 10, it wasn't enough to fully clean the signal, the result still looked jagged and unpredictable. This trial showed that if the salt is too strong and the smoother doesn't scale with it, the function stays messy.



Original Salter Smoother and Plotter writeup

Parameters set :
X = -10, x<= 10, x+= 0.01
Salter min -0.05, max 0.05
Smoother 25

This version had very subtle noise and a much more precise curve due to the small step size. The smoothing window was larger than the others, which helped even out the minor bumps without noticeably affecting the original curve. The result was a very clean and smooth output. This trial shows how light salt with dense sampling and a longer smoothing window creates the cleanest visual result.