Create a visually appealing plot to represent the sine and cosine functions, with various adjustments and customizations, then save the figure to a file.

Generate Data:

- Use `np.linspace` to create an array `x` of 100 values between 0 and 10.
- Compute the sine (`np.sin(x)`) and cosine (`np.cos(x)`) of `x`.

Create a Figure with Subplots:

- Create a figure with two subplots: one for a simple line plot and another for a scatter plot.

Line Plot Customizations:

- In the first subplot, plot the sine function as a solid line and the cosine function as a dashed line.
- Customize line colors (`color='blue'` for sine and `color='orange'` for cosine).
- Set axes limits from 0 to 10 on the x-axis and -1.5 to 1.5 on the y-axis.
- Add labels to the x-axis and y-axis, a title for the plot, and a legend for the sine and cosine curves.

Scatter Plot with Error Bars:

- In the second subplot, plot a scatter plot of `x` vs. `sin(x)`.
- Add error bars to each data point using `plt.errorbar`. Use a random normal distribution to generate small errors (e.g., `yerr=0.4`).
- Set a distinct color and shape (e.g., red squares) for the scatter plot.

Save the Figure:

- Save the entire figure as a `.png` file with the filename `trigonometric_plots.png`.

Additional Enhancements (Optional):

- Experiment with different markers, line styles, or colors.
- Adjust the figure size for better visibility if needed.