```python
# Activation Functions Plotting in Neural Networks

import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

def sigmoid(x):
    return 1 / (1 + np.exp(-x))

def tanh(x):
    return np.tanh(x)

def relu(x):
    return np.maximum(0, x)

def leaky_relu(x, alpha=0.01):
    return np.where(x > 0, x, alpha * x)

def elu(x, alpha=1.0):
    return np.where(x > 0, x, alpha * (np.exp(x) - 1))

# Create a range of values
x = np.linspace(-10, 10, 1000)

# Plot all activation functions
plt.figure(figsize=(10, 6))
```

<Figure size 1000x600 with 0 Axes>

<Figure size 1000x600 with 0 Axes>

```python
# Plot all activation functions
plt.figure(figsize=(10, 6))

plt.plot(x, sigmoid(x), label='Sigmoid', color='blue')
plt.plot(x, tanh(x), label='Tanh', color='red')
plt.plot(x, relu(x), label='ReLU', color='green')
plt.plot(x, leaky_relu(x), label='Leaky ReLU', color='purple')
plt.plot(x, elu(x), label='ELU', color='orange')

plt.title('Activation Functions')
plt.xlabel('Input')
plt.ylabel('Output')
plt.legend()
plt.grid(True)
plt.axhline(0, color='black', linewidth=0.5)
plt.axvline(0, color='black', linewidth=0.5)
plt.tight_layout()
plt.show()
```

Activation Functions