```python
import matplotlib.pyplot as plt

# Define the neural network architecture
input_layer = 2
hidden_layer = 3
output_layer = 1

# Plot the neural network
fig, ax = plt.subplots(figsize=(8, 5))

# Add the input layer nodes
for i in range(input_layer):
    ax.add_artist(plt.Circle((0, i), 0.1, color='blue'))
    ax.annotate(f'Input {i+1}', xy=(0, i), fontsize=12, ha='center', va='center')

# Add the hidden layer nodes
for i in range(hidden_layer):
    ax.add_artist(plt.Circle((0.5, i+1), 0.1, color='green'))
    ax.annotate(f'Hidden {i+1}', xy=(0.5, i+1), fontsize=12, ha='center',
va='center')

# Add the output layer nodes
for i in range(output_layer):
    ax.add_artist(plt.Circle((1, i+1), 0.1, color='red'))
    ax.annotate(f'Output {i+1}', xy=(1, i+1), fontsize=12, ha='center',
va='center')

# Connect the input layer to the hidden layer
for i in range(input_layer):
    for j in range(hidden_layer):
        ax.plot([0, 0.5], [i, j+1], color='black')

# Connect the hidden layer to the output layer
for i in range(hidden_layer):
    for j in range(output_layer):
        ax.plot([0.5, 1], [i+1, j+1], color='black')

# Add titles and labels
ax.set_title('Neural Network Visualization', fontsize=16)
ax.set_xlabel('Layers', fontsize=14)
ax.set_ylabel('Nodes', fontsize=14)
ax.set_xticks([0, 0.5, 1])
ax.set_xticklabels(['Input', 'Hidden', 'Output'], fontsize=12)

# Show the plot
plt.show()
```