

# Countplot

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## Basic Countplot

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```
sns.countplot(data=data, x='Category')  
plt.title('Countplot of Categories')  
plt.show()
```

## Countplot with Hue

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```
sns.countplot(data=data, x='Category', hue='Subcategory', palette='coolwarm')  
plt.title('Countplot of Categories with Hue')  
plt.show()
```

### 1. Sequential Palettes

Examples:

- viridis
- magma
- plasma
- cividis
- rocket
- crest
- Blues
- Greens

```
sns.countplot(data=data, x='Category', palette='magma')
```

### 2. Diverging Palettes

- Used for data with a meaningful midpoint (e.g., positive and negative values).

Examples:

- coolwarm
- Spectral
- RdBu (Red-Blue)
- PiYG (Pink-Green)
- PuOr (Purple-Orange)

```
sns.countplot(data=data, x='Category', palette='coolwarm')
```

### 3. Qualitative Palettes

- Used for categorical data with no inherent order. Good for discrete categories.

Examples:

- Set1
- Set2
- Set3
- Pastel1
- Pastel2
- Dark2
- Paired
- tab10 (Matplotlib default)

```
sns.countplot(data=data, x='Category', palette='Set2')
```

### 4. Cyclic Palettes

Used for circular or periodic data, such as angles, time of day, or days of the week.

Examples:

- twilight
- hsv

```
sns.countplot(data=data, x='Category', palette='twilight')
```

### 5. Custom Palettes

You can create custom palettes using specific colors:

```
custom_palette = ['#FF5733', '#33FF57', '#3357FF']  
sns.countplot(data=data, x='Category', palette=custom_palette)
```