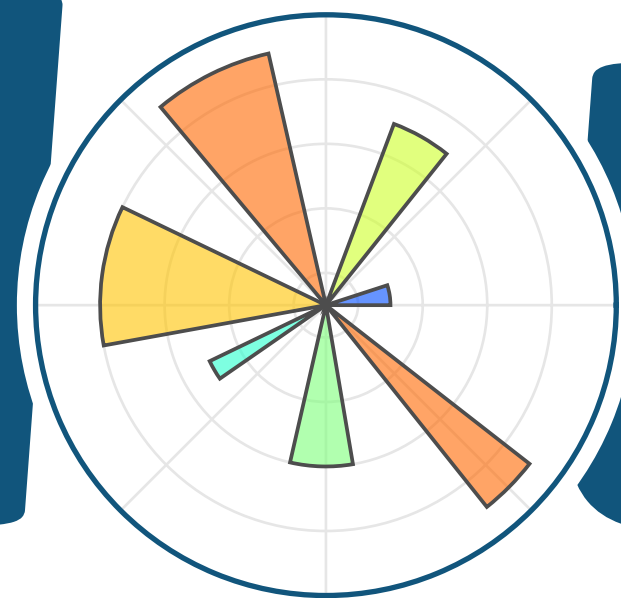
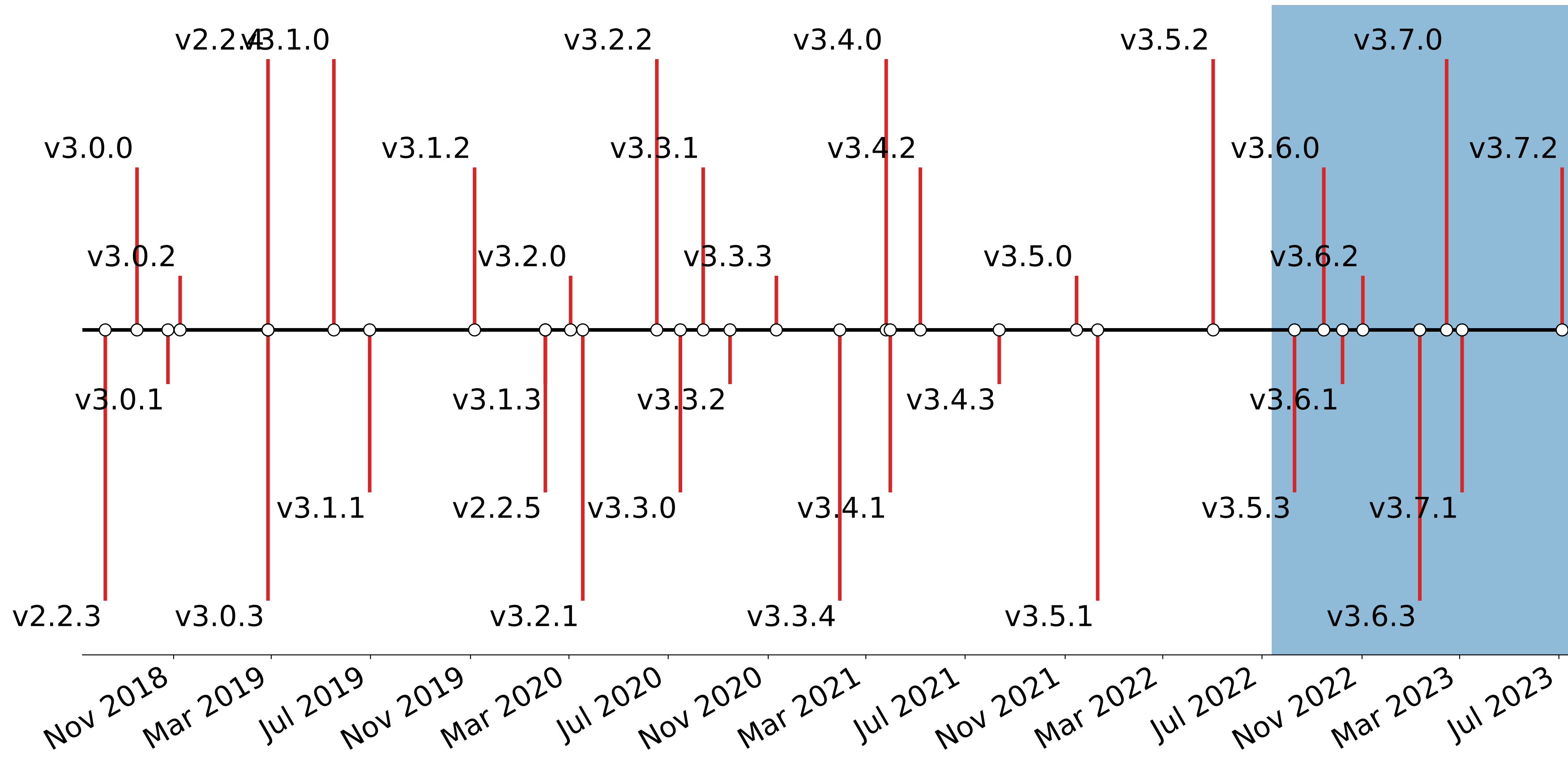
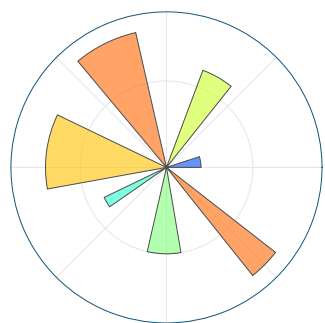


# matplotlib

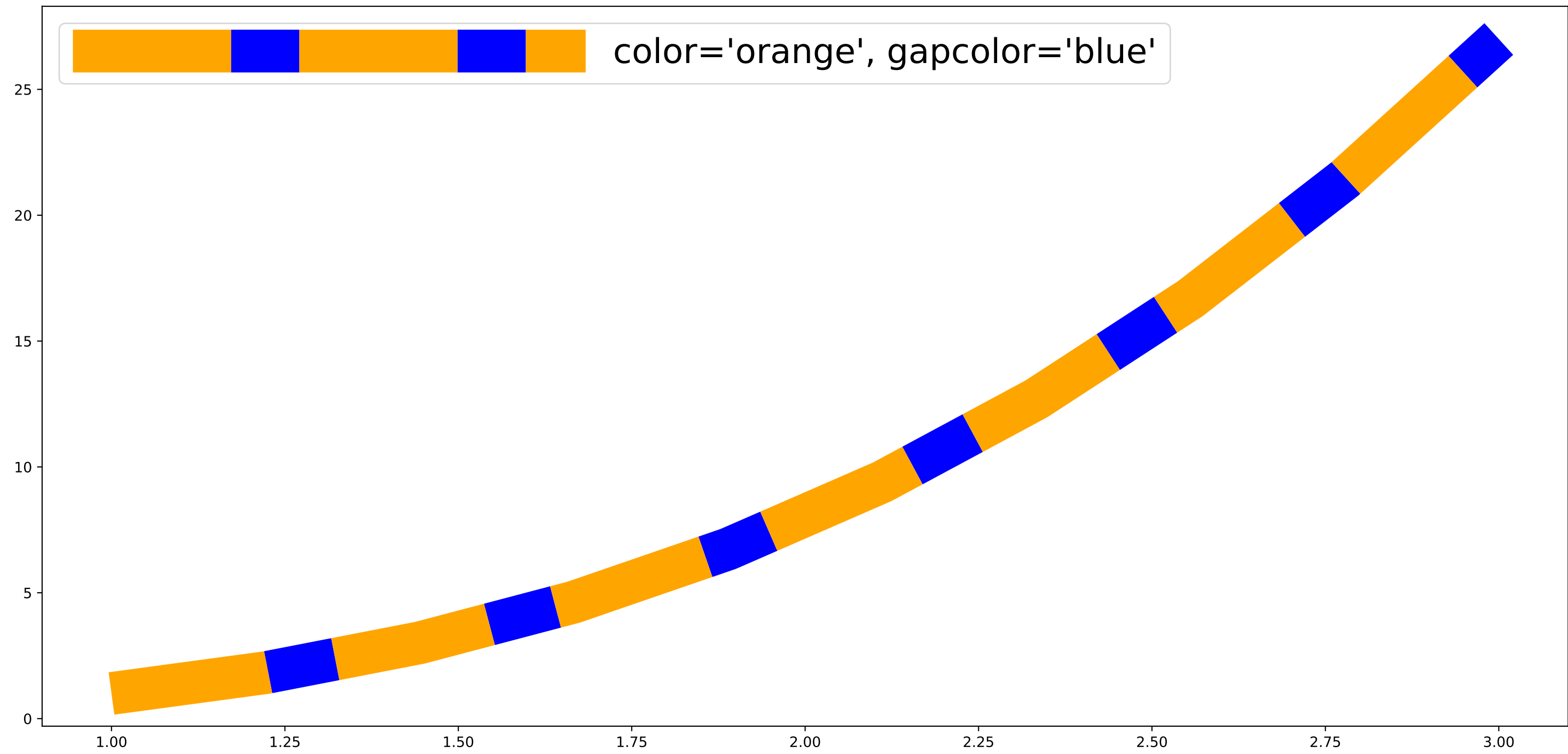
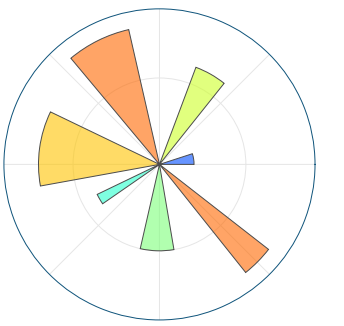


SciPy 2023  
@matplotlib

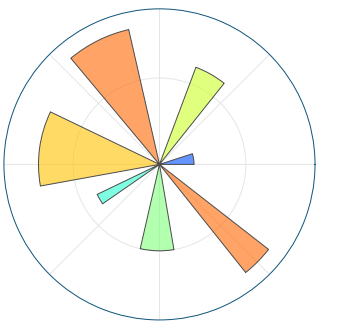
# Release History



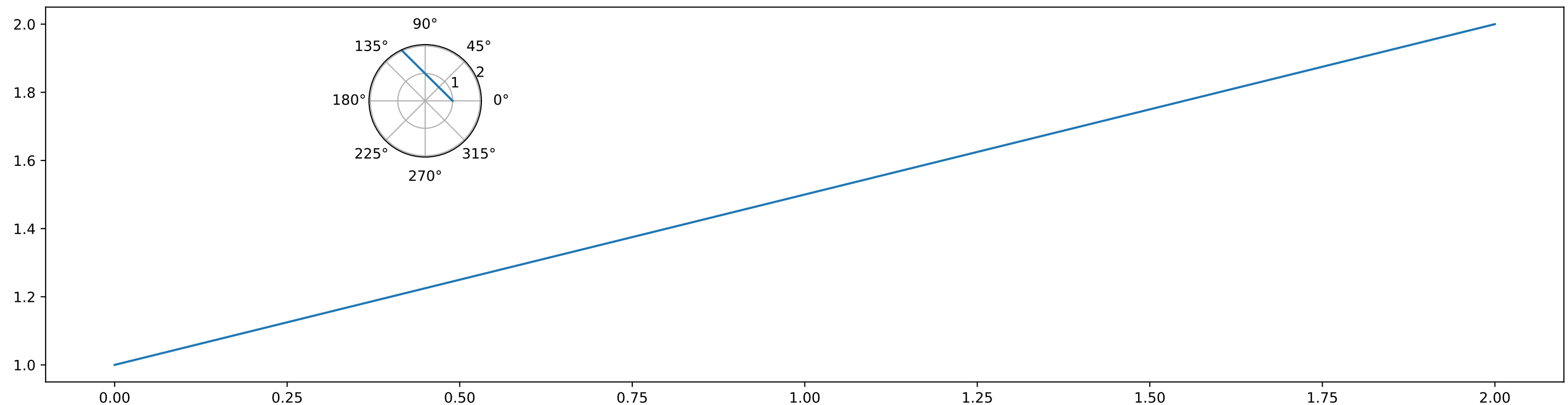
# 3.6: Striped lines



## 3.6: Axes.inset\_axes flexibility



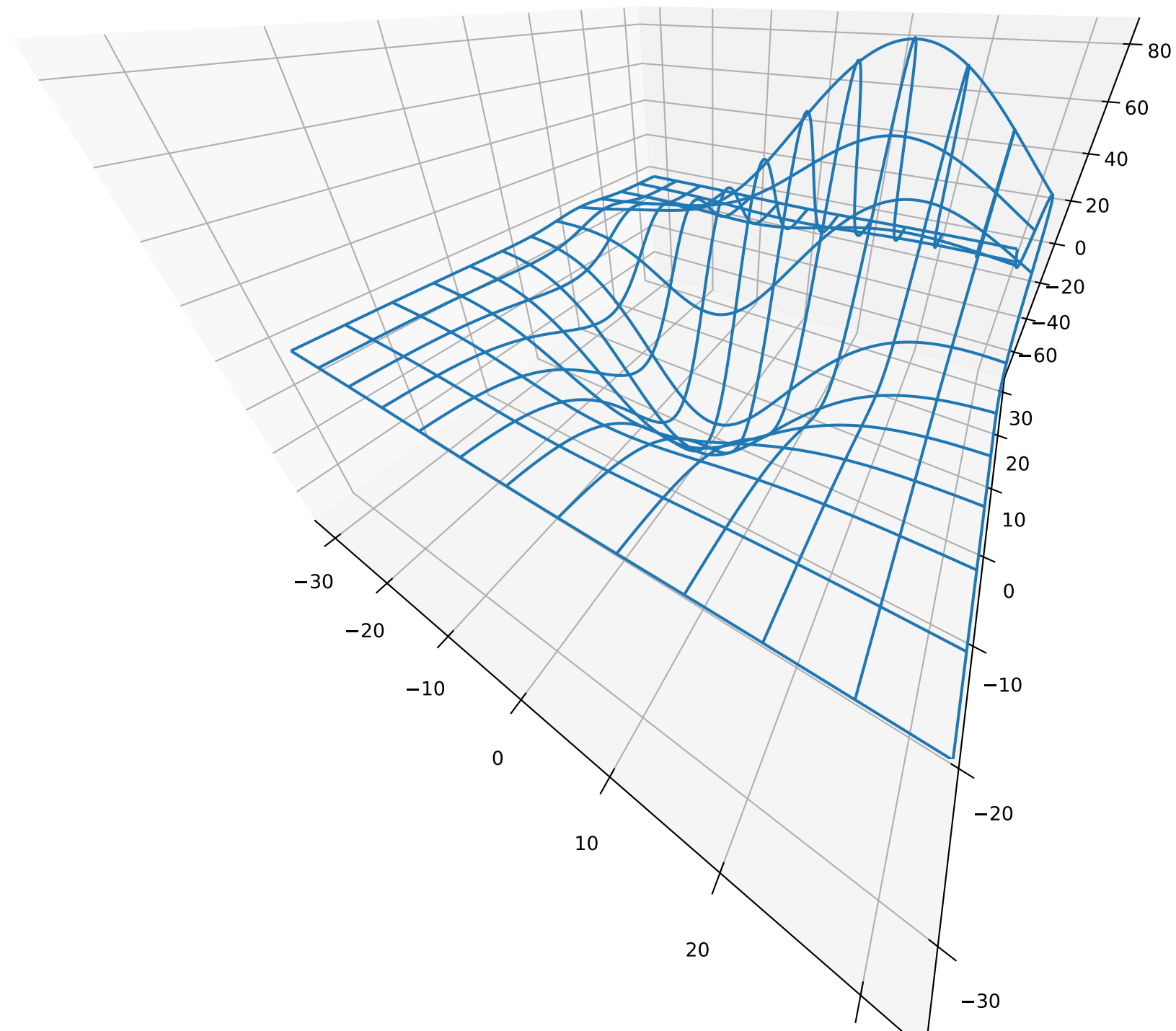
```
fig, ax = plt.subplots()
ax.plot([0, 2], [1, 2])
polar_ax = ax.inset_axes([0.1, 0.6, 0.3, 0.3],
                          projection='polar')
polar_ax.plot([0, 2], [1, 2])
```



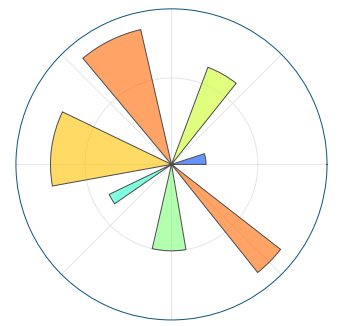
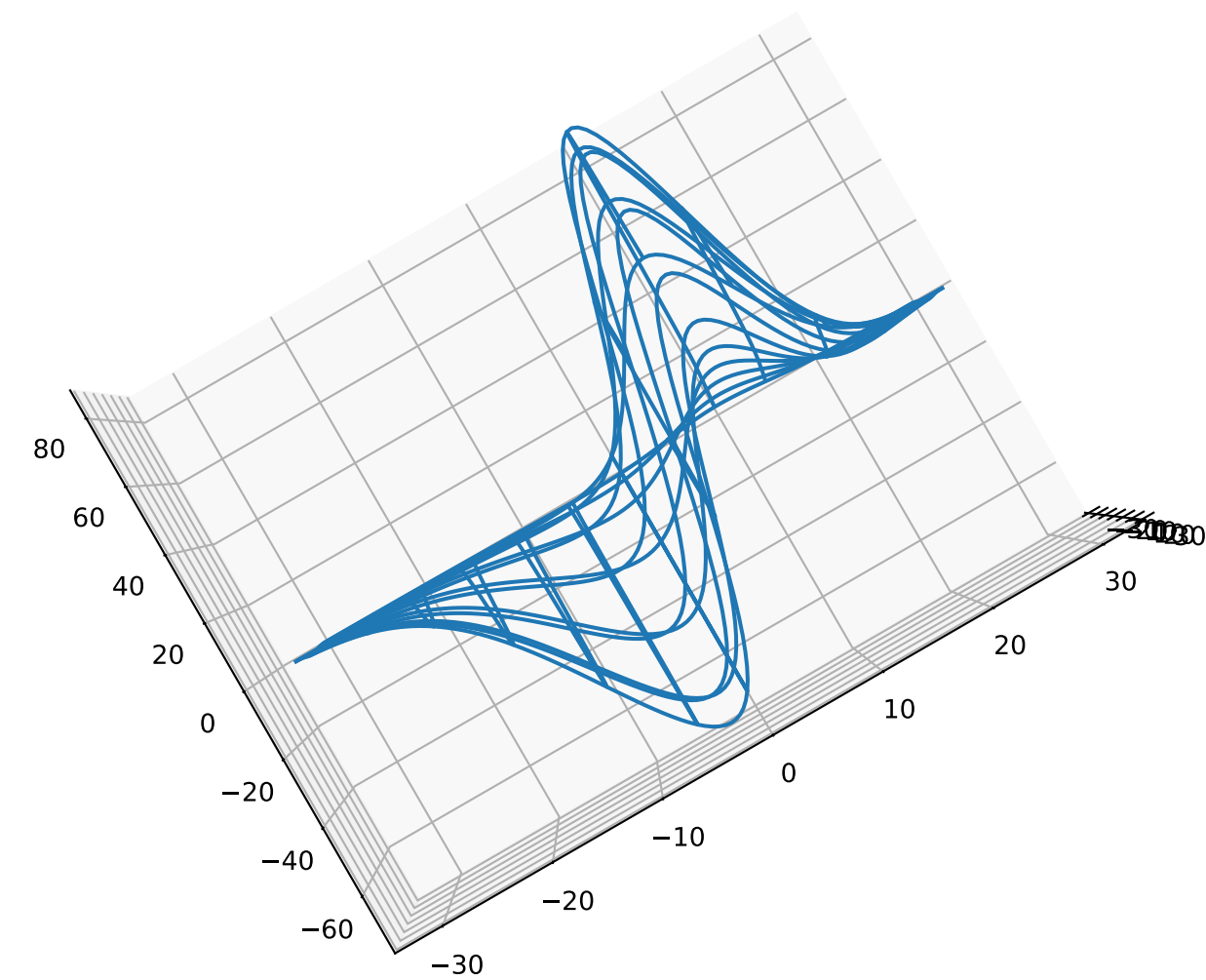
PR by @rcomer

# 3.6: 3D Improvements

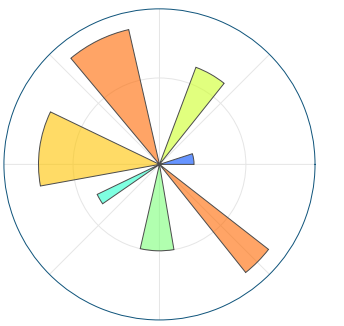
focal\_length = 0.1



roll=30



## 3.6: Font Fallback

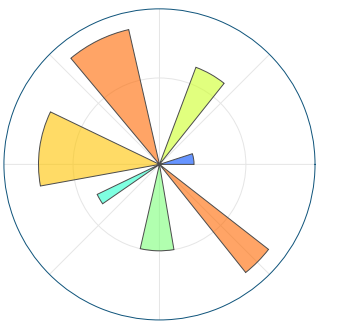


There are 染 感じ in between!  
['Noto Sans JP']

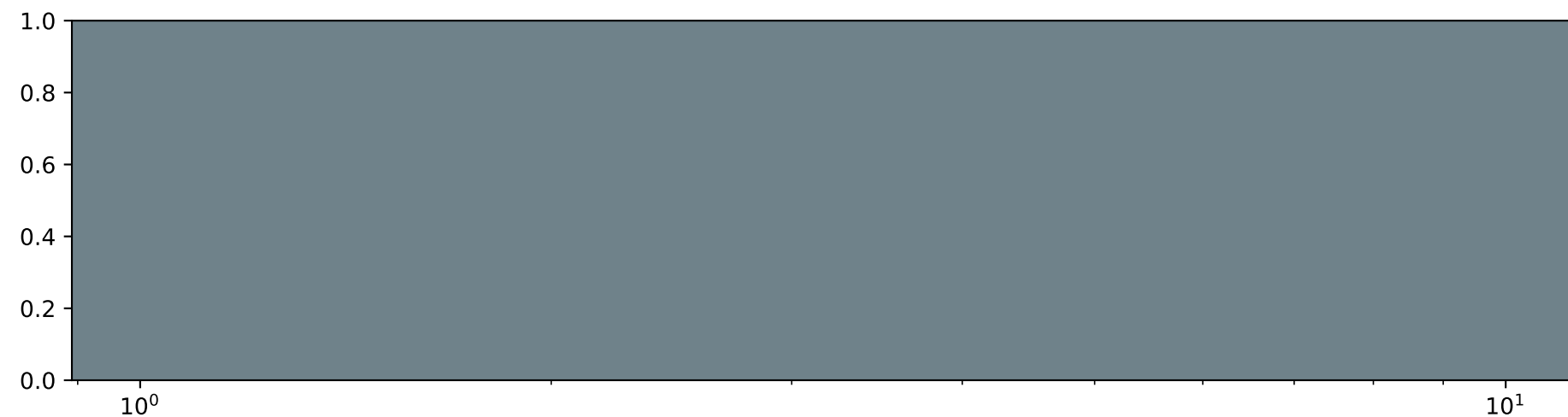
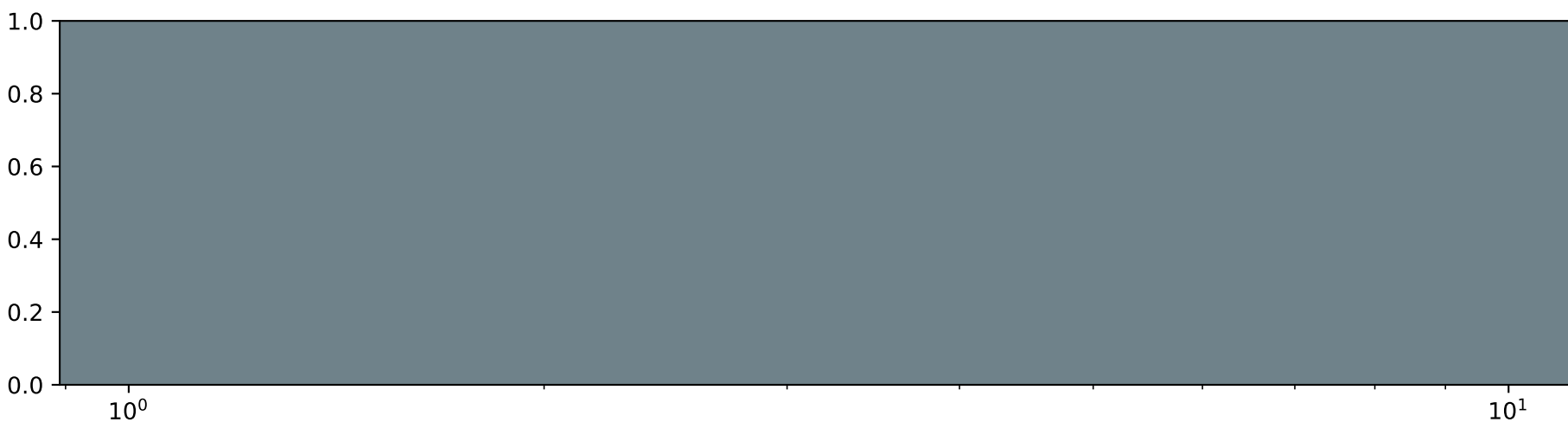
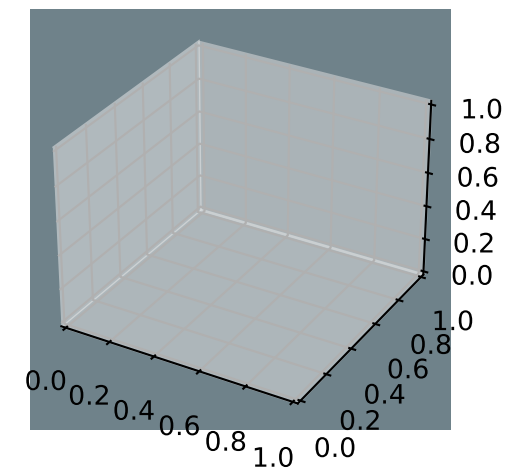
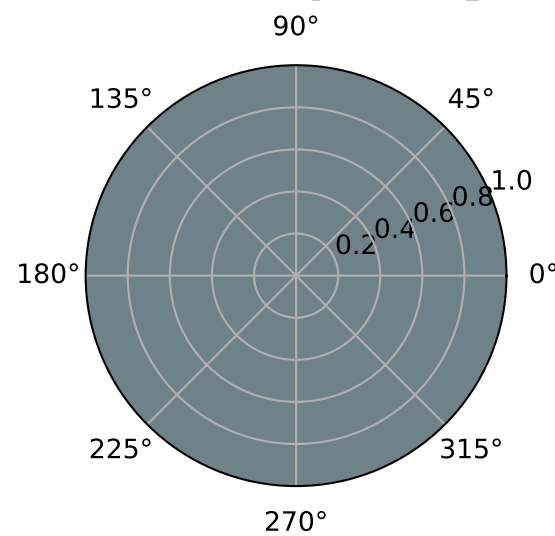
There are □ □□ in between!  
['DejaVu Sans']

There are 染 感じ in between!  
['DejaVu Sans', 'Noto Sans JP']

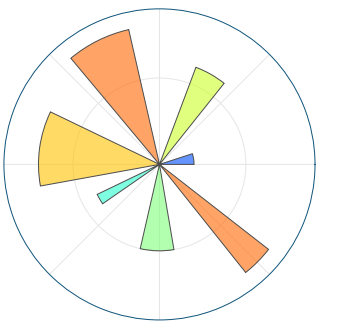
# 3.7: Mosaic per-subplot kwargs



```
axd = fig.subplot_mosaic(  
    "AB;CD",  
    subplot_kw={'facecolor': 'xkcd:slate grey'},  
    per_subplot_kw={  
        "A": {"projection": "polar"},  
        ("C", "D"): {"xscale": "log"},  
        "B": {"projection": "3d"},  
    })
```



# 3.7: Widget styling



Default

☐ Apples

☐ Oranges

☒ Apples

☒ Oranges

Stylized

☐ Apples

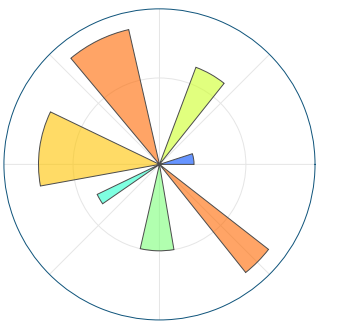
☐ Oranges

☒ Apples

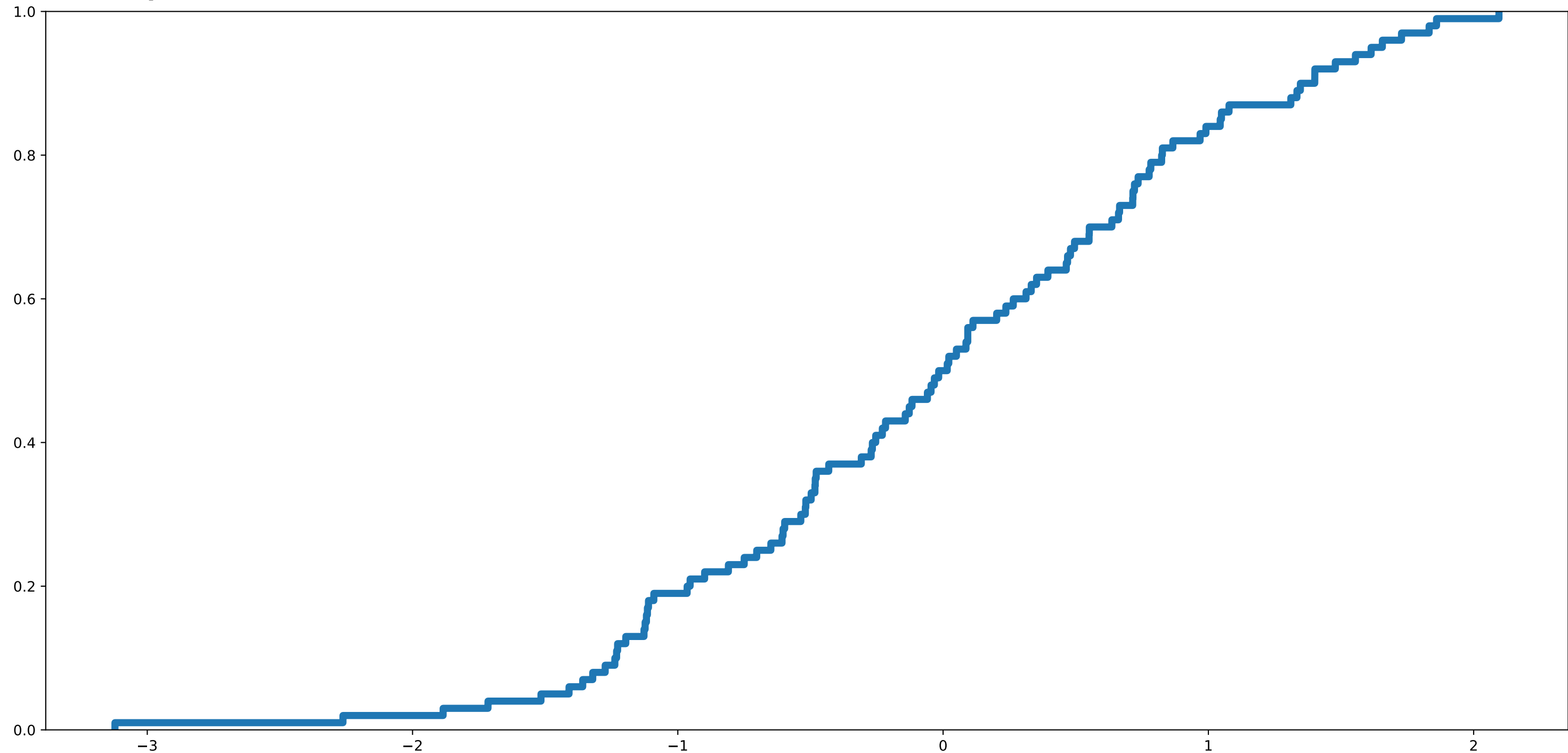
☒ Oranges



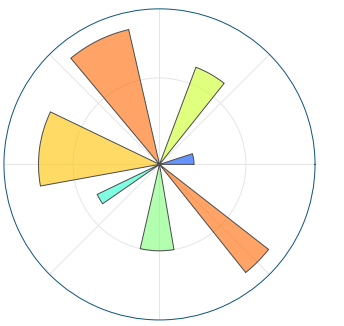
# 3.8: ECDFs



```
ax.ecdf(np.random.randn(100))
```



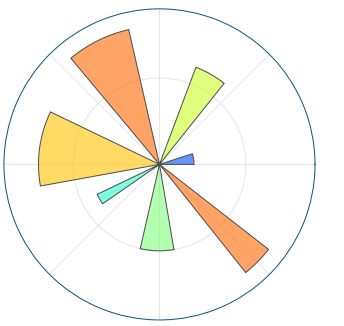
PR by @anntzer



## 3.8: Mathtext improvements

Improvements lead by GSoC student @devRD (Ratnabali Dutta)

- **\boldsymbol support (PR#25661)**  
 $\text{\boldsymbol{a+2+\alpha}} \rightarrow \mathbf{a + 2 + \alpha}$
- **More mathematical operators (PR#26024)**  
 $\text{\dagger} \dagger, \text{\QED} \blacksquare, \text{\sinewave} \sim, \text{\isinE} \in, \text{etc.}$
- **More relational operators (PR#25933)**  
 $\text{\leqq} \leq, \text{\lessgtr} \lesseqgtr, \text{\backsim} \backsim, \text{\precsim} \precsim, \text{\gtrapprox} \gtrapprox, \text{\ll} \ll, \text{\Vvdash} \Vdash, \text{\triangle} \triangle, \text{etc.}$
- **Support for \text (PR#22173 by @oscargus)**  
 $\text{\text{text}} \rightarrow \textit{mathtext}$



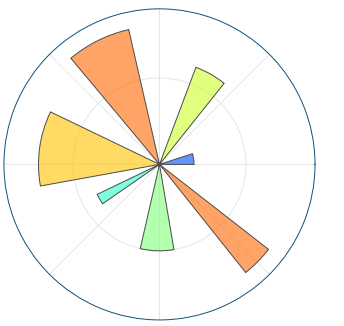
## 3.8: Upcoming features

- Documentation guides overhaul
- GSoD for example categorization (Eva Sibinga)
- Typing support

```
bar(x: float | ArrayLike, height: float | ArrayLike,  
    width: float | ArrayLike, bottom: float | ArrayLike | None,  
    *, align: Literal["center", "edge"],  
    **kwargs) -> BarContainer:
```

- **Your Contribution?**
  - New Contributors Meeting (first Tuesday of month)

# Thank You!



**This entire presentation was made in Matplotlib:**  
**<https://github.com/QuLogic/scipy2023-mpl-update>**