第十二课--PyEcharts

任务目标

1、pyecharts的安装

2、绘制柱状图

3、绘制饼图

4、使用子图

5、定制化网格

6、创建等高线图

7、填充图表底层区域

8、绘制极线图

9、使用极线条可视化文件系统树

10、定制matplotlib绘图风格

相关知识

1、学习pyecharts的基本功能。

1、Pyecharts的安装

1、到https://www.runoob.com/echarts/echarts-install.html网址，下载Echarts.js包。

2、pip3 install pyecharts

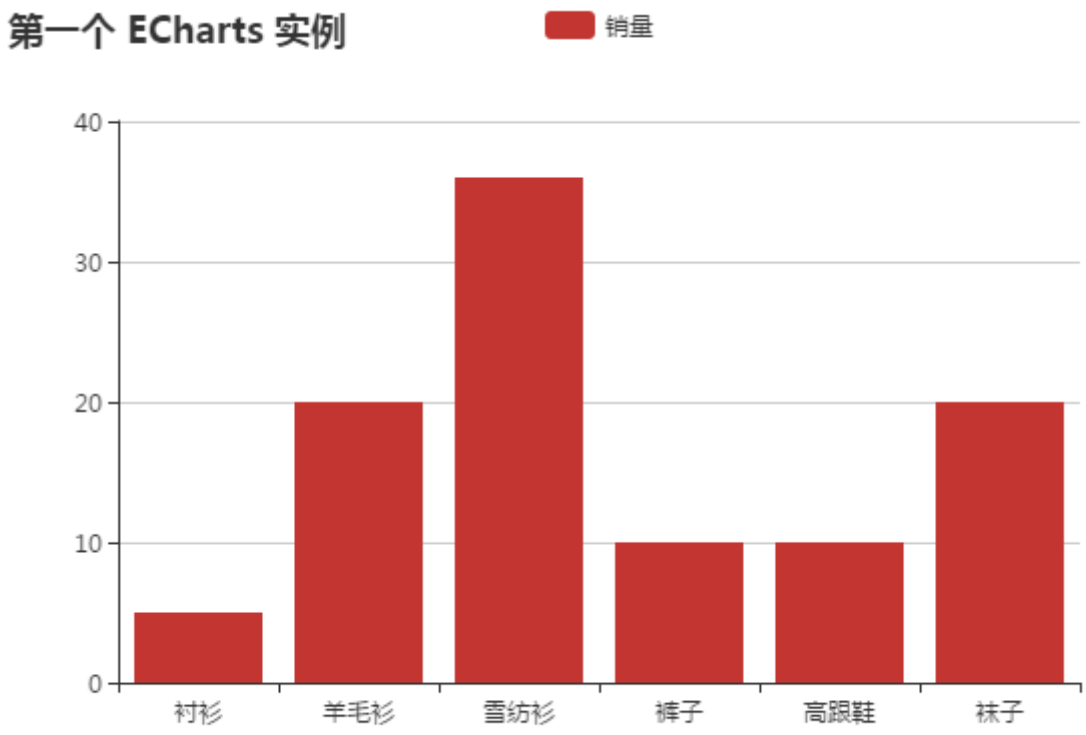
```
from pyecharts.charts import Bar;
import webbrowser

bar = Bar();
bar.add_xaxis(["衬衫", "羊毛衫", "雪纺衫", "裤子", "高跟鞋", "袜子"]);
bar.add_yaxis("商家A", [5, 20, 36, 10, 75, 90]);
# render 会生成本地 HTML 文件，默认会在当前目录生成 render.html 文件
# 也可以传入路径参数，如 bar.render("mycharts.html")
bar.render('mycharts.html');
chromePath = r'C:\Program Files (x86)\Google\Chrome\Application\chrome.exe';
      webbrowser.register('chrome', None,
webbrowser.BackgroundBrowser(chromePath));
webbrowser.get('chrome').open_new_tab('f://mycharts.html');
```

2、使用pyecharts绘制柱状图

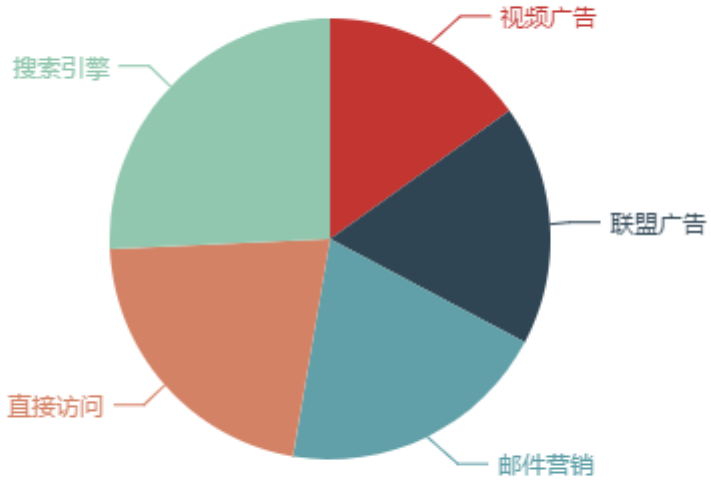
```
from pyecharts.charts import Bar;
import webbrowser

bar = Bar();
x = ["衬衫", "羊毛衫", "雪纺衫", "裤子", "高跟鞋", "袜子"];
y = [5, 20, 36, 10, 75, 90];
bar.add_xaxis(x);
bar.add_yaxis("商家A", y);
bar.render('mycharts.html');
chromePath = r'C:\Program Files (x86)\Google\Chrome\Application\chrome.exe';
      webbrowser.register('chrome', None,
webbrowser.BackgroundBrowser(chromePath));
webbrowser.get('chrome').open_new_tab('f://mycharts.html');
```



3、绘制饼图

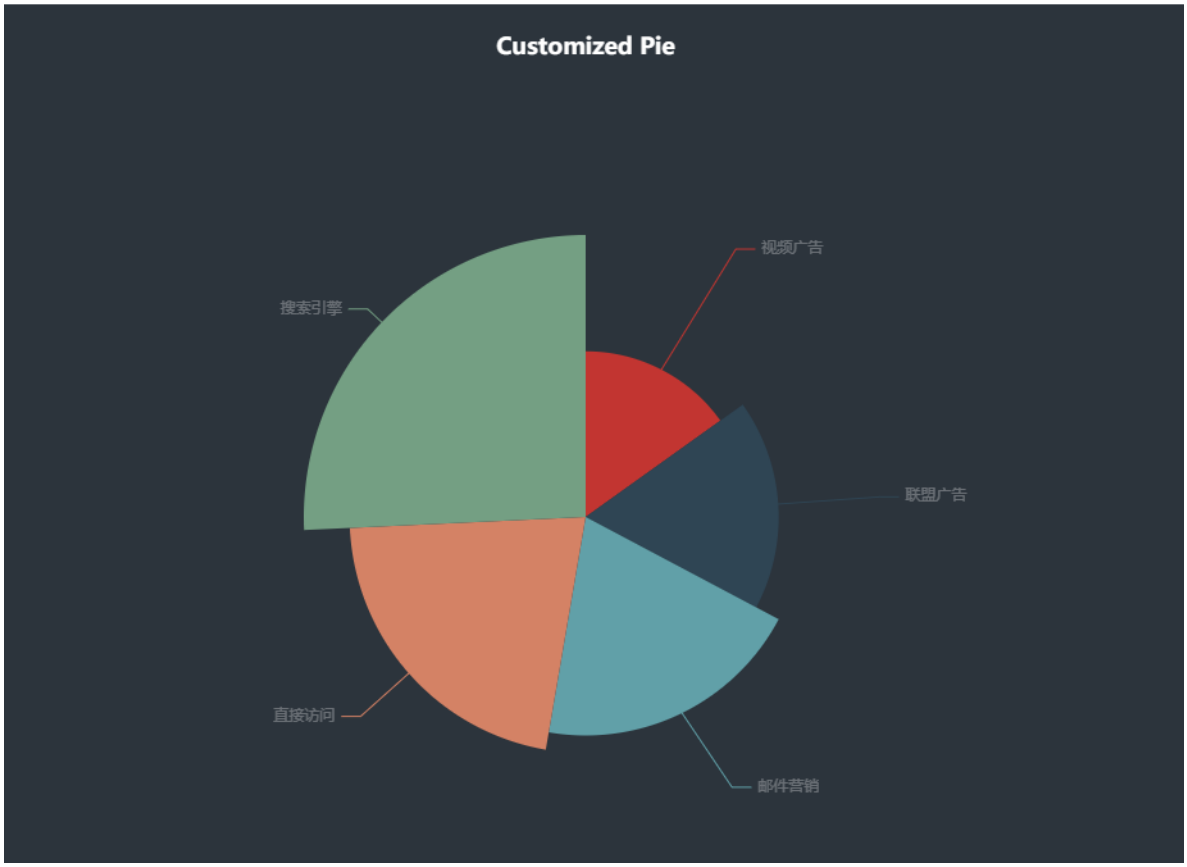
```
from pyecharts import options as opts;
from pyecharts.charts import Pie;
x = ['青岛','百威','奶茶','绿茶','橙汁','雪碧','可乐'];
y = [127,74,120,142,135,100,136];
p = Pie();
p.add("", [list(z) for z in zip(x, y)]);
p.set_colors(["blue", "green", "yellow", "red", "pink", "orange", "purple"]);
p.set_global_opts(title_opts=opts.TitleOpts(title="Pie-设置颜色"));
p.set_series_opts(label_opts=opts.LabelOpts(formatter="{b}: {c}"));
p.render("pie_set_color.html");
chromePath = r'C:\Program Files (x86)\Google\Chrome\Application\chrome.exe';
      webbrowser.register('chrome', None,
webbrowser.BackgroundBrowser(chromePath));
webbrowser.get('chrome').open_new_tab('f://pie_set_color.html');
```



4、自定义饼图

```
import pyecharts.options as opts
from pyecharts.charts import Pie

x_data = ["直接访问", "邮件营销", "联盟广告", "视频广告", "搜索引擎"];
y_data = [335, 310, 274, 235, 400];
data_pair = [list(z) for z in zip(x_data, y_data)];
data_pair.sort(key=lambda x: x[1]);
p= Pie(init_opts=opts.InitOpts(width="1600px", height="800px",
bg_color="#2c343c"));
p.add(series_name="访问来
源",data_pair=data_pair,rosetype="radius",radius="55%",center=["50%",
"50%"],label_opts=opts.LabelOpts(is_show=False, position="center"),);
p.set_global_opts(title_opts=opts.TitleOpts(title="Customized
Pie",pos_left="center",pos_top="20",title_textstyle_opts=opts.TextStyleOpts(colo
r="#fff"),),legend_opts=opts.LegendOpts(is_show=False),);
p.set_series_opts(tooltip_opts=opts.TooltipOpts(trigger="item", formatter="{a}
<br/>{b}: {c} ({d}%)"),label_opts=opts.LabelOpts(color="rgba(255, 255, 255,
0.3)"),);
p.render("customized_pie.html");
chromePath = r'C:\Program Files (x86)\Google\Chrome\Application\chrome.exe';
      webbrowser.register('chrome', None,
webbrowser.BackgroundBrowser(chromePath));
webbrowser.get('chrome').open_new_tab('f://customized_pie.html');
```



5、3D地图显示

```
from pyecharts import options as opts
from pyecharts.charts import Map3D
from pyecharts.globals import ChartType

example_data = [
    [[119.107078, 36.70925, 1000], [116.587245, 35.415393, 1000]],
    [[117.000923, 36.675807], [120.355173, 36.082982]],
    [[118.047648, 36.814939], [118.66471, 37.434564]],
    [[121.391382, 37.539297], [119.107078, 36.70925]],
    [[116.587245, 35.415393], [122.116394, 37.509691]],
    [[119.461208, 35.428588], [118.326443, 35.065282]],
    [[116.307428, 37.453968], [115.469381, 35.246531]],
]
c = (
    Map3D()
    .add_schema(
        maptype="山东",
        itemstyle_opts=opts.ItemStyleOpts(
            color="rgb(5,101,123)",
            opacity=1,
            border_width=0.8,
            border_color="rgb(62,215,213)",
        ),
        light_opts=opts.Map3DLightOpts(
            main_color="#fff",
            main_intensity=1.2,
            is_main_shadow=False,
            main_alpha=55,
            main_beta=10,
            ambient_intensity=0.3,
```

```
        ),
        view_control_opts=opts.Map3DViewControlOpts(center=[-10, 0, 10]),
        post_effect_opts=opts.Map3DPostEffectOpts(is_enable=False),
    )
    .add(
        series_name="",
        data_pair=example_data,
        type_=ChartType.LINES3D,
        effect=opts.Lines3DEffectOpts(
            is_show=True,
            period=4,
            trail_width=3,
            trail_length=0.5,
            trail_color="#f00",
            trail_opacity=1,
        ),
        linestyle_opts=opts.LineStyleOpts(is_show=False, color="#fff",
opacity=0),
    )
    .set_global_opts(title_opts=opts.TitleOpts(title="Map3D-Lines3D"))
    .render("map3d_with_lines3d.html")
)
```

Map3D-Lines3D