**第九章课后作业二**

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习题9.5

乒乓球选手雷达图绘制

import numpy as np

import matplotlib.pyplot as plt

import matplotlib

matplotlib.rcParams['font.family']='SimHei'

matplotlib.rcParams['font.sans-serif'] = ['SimHei']

radar\_labels = np.array(['发球','力量','速度','经验','技术','综合'])

nAttr = 6

data = np.array([[7, 8, 8, 6, 9, 8],

[5, 5, 9, 7, 3, 6],

[8, 9, 4, 8, 5, 7],

[4, 7, 8, 8, 7, 5],

[6, 8, 7, 4, 6, 7],

[4, 6, 6, 9, 3, 6]])

data\_labels = ('张继科', '马龙', '丁宁', '李晓霞', '刘诗雯','张怡宁')

angles = np.linspace(0, 2\*np.pi, nAttr, endpoint=False)

data = np.concatenate((data, [data[0]]))

angles = np.concatenate((angles, [angles[0]]))

fig = plt.figure(facecolor="white")

plt.subplot(111, polar=True)

plt.plot(angles,data,'o-', linewidth=1.5, alpha=0.2)

plt.fill(angles,data, alpha=0.25)

plt.thetagrids(angles\*180/np.pi, radar\_labels,frac = 1.2)

plt.figtext(0.52, 0.95, '中国乒乓球运动员能力分析', ha='center', size=20)

legend = plt.legend(data\_labels, loc=(0.94, 0.80), labelspacing=0.1)

plt.setp(legend.get\_texts(), fontsize='small')

plt.grid(True)

plt.show()

结果：

