使用 Pillow

Hui Li

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1 一般流程

1. 安装 Python

安装最新版的 Python. 正常安装之外,还需要安装 Numpy, Pillow 两个包。

2. 安装 PyCharm

对教师和学生免费激活。

3. 新建项目

4. 新建文件

新建 Python 文件。

5. 运行

可通过菜单或快捷键运行。



图 1: 使用 PyCharm 的 IDE 环境

| 😫 New Project | | - | | × |
|---------------------|-----------|--|---|--------|
| 🍦 Pure Python | Location: | C\ELL\Codes\Python\HuiLiCGDemo | | P=- |
| 🚺 Django | Location. | | | |
| C Flask | Project I | nterpreter: New Virtualenv environment | | |
| 🔗 Google App Engine | | | | |
| 🔅 Pyramid | | | | |
| 🐺 Web2Py | | | | |
| III Scientific | | | | |
| 🔇 Angular CLI | | | | |
| 🔇 AngularJS | | | | |
| B Bootstrap | | | | |
| E Foundation | | | | |
| HTML5 Boilerplate | | | | |
| 🏶 React App | | | | |
| 🏶 React Native | | | | |
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图 2: 新建项目

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| | HuiLiC | GDem | \rightarrow | | | | | | | Add Configuration | n 🕨 | ĕ | € 6 | ■ | | 0 |
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图 3: 新建项目后的界面



图 4: 新建 Python 文件

| 😫 New | Python file | | × |
|---------------|---------------|-----------|--------|
| <u>N</u> ame: | CGDemo001 | | †↓ |
| Kind: | 襣 Python file | | \sim |
| | | OK Cancel | |

图 5: 输入文件名称

2 代码

```
2 代码
```

输入代码并运行:

```
import numpy as np
from PIL import Image, ImageDraw, ImageFont
array = np.ndarray((480, 640, 3), np.uint8)
array[:, :, :] = 255
image = Image.fromarray(array)
draw = ImageDraw.Draw(image)
draw.point([(30, 20), (31, 21), (32, 22),(33, 23), (34, 24), (35, 25)], fill='red')
draw.line((100, 100, 400, 250), 'blue')
draw.line((100, 100, 400, 250), 'blue')
draw.rectangle((180, 130, 350, 420), None, 'red')
draw.arc((100, 200, 300, 400), 0, 360, 'black')
draw.ellipse((150, 200, 500, 400), None, 'green')
draw.chord((350, 50, 500, 200), 0, 120, None, 'orange')
draw.polygon((150, 180, 200, 180, 250, 120, 230, 90, 130, 100), None, 'hotpink')
draw.text((100, 50), u'CG Demo', 'red')
image.show()
```

3 运行

- 菜单运行: Run -> "Run CGDemo001"
- 或者快捷键 Shift + F10



图 6: 运行结果