

README

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1. Environment

PyCharm 2019.3

macOS Catalina 10.15.7

⚠ The system command using in this project is based on macOS system, so it may has no response on windows.

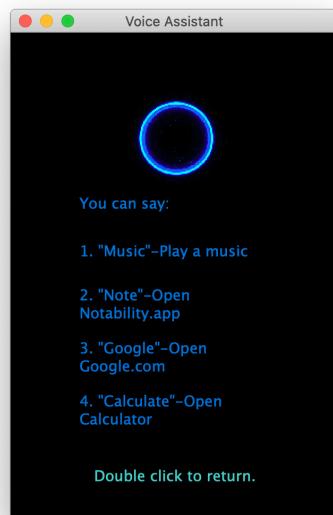
```
os.system("open resources/Lemon.mp3")
os.system("open /Applications/Notability.app")
os.system("open https://google.com")
os.system("open /System/Applications/Calculator.app")
```

2. Using

- run the `myVoiceAssistant.py` file
- Say "hello" to **Wake up** the assistant



- Double click **at the home page** to show the help list



- once wake up the assistant, say different instructions to use different functions
 - Music -> wake up the music player and play the music

序号	歌曲	歌手	专辑	时长
06	Cool Again	Shoffy	Lenses	03:11
07	Intentions	Justin Bieber / Quavo	Summer Time	03:32
08	Lemon (电视剧《非自然死亡》主题曲)	米津玄師	Lemon	04:16
09	你曾是少年	焦迈奇	你曾是少年	04:34
10	LET IT GO	DJ Khaled / Justin Bi...	KHALED KHALED	02:45
11	卡西莫多的礼物	华晨宇	卡西莫多的礼物	03:34
12	枕边故事	华晨宇	卡西莫多的礼物	04:23
13	我们都是孤独的 (All Lonely)	华晨宇	卡西莫多的礼物	04:03
14	消失的昨天	华晨宇	消失的昨天	03:47
15	我离孤单几公里	华晨宇	我离孤单几公里	04:05
16	无聊人	华晨宇	无聊人	03:49
17	国王与乞丐	华晨宇 / 杨宗纬	异类	04:05
18	Love You Different	Justin Bieber / BEAM	Justice (中国豪华特别版)	03:06
19	Loved By You	Justin Bieber / Burna ...	Justice (中国豪华特别版)	02:39

Lemon (电视剧《非自然死亡》主题曲) - 米津玄師
00:49 / 04:16

- Note -> wake up the Notability.app

Screenshot of a digital note-taking application showing a library of notes and a detailed note on "Chapter 2 Corner Detection".

Library:

- All Notes: 214
- Recent Notes: 10
- Unfiled Notes: 28
- 托福: 21
- 计算机视觉: 14
- 计算机图形学: 3
- 用户交互技术: 1
- 软件过程管理: 4
- 软件测试: 5
- 409: 4
- 面试: 4
- 剧本杀: 3
- 你需要一些摘抄: 2
- 各种经验分享: 4
- 出国:
 - 出国准备: 2
 - 大二上: 7
 - 大二下: 7
 - 大三上: 5

Note Content:

第5章 图形变换与裁剪

计算机图形学
第5章 图形变换与裁剪
Apr 19, 2021 at 15:36

Key property: in the region around a corner, image gradient has **two or more dominant** directions. 支配性的

多元函数的泰勒展开

$$f(x+\Delta x) = f(x) + f'(x)\Delta x + \frac{1}{2}f''(x)\Delta x^2 + o(\Delta x)^2$$

$$\nabla f(x+\Delta x) = \nabla f(x) + \nabla^2 f(x) \Delta x + o(|\Delta x|)$$

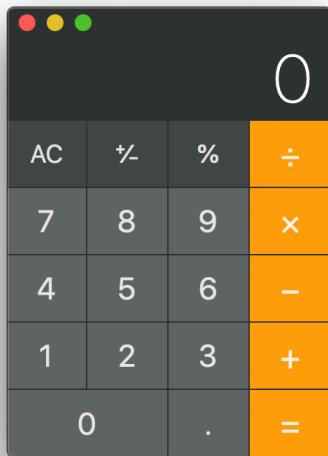
二元函数的泰勒展开升

$$f(x_i, y_i) = f(x_i, y_i) - f(x_i + \Delta x, y_i + \Delta y)$$

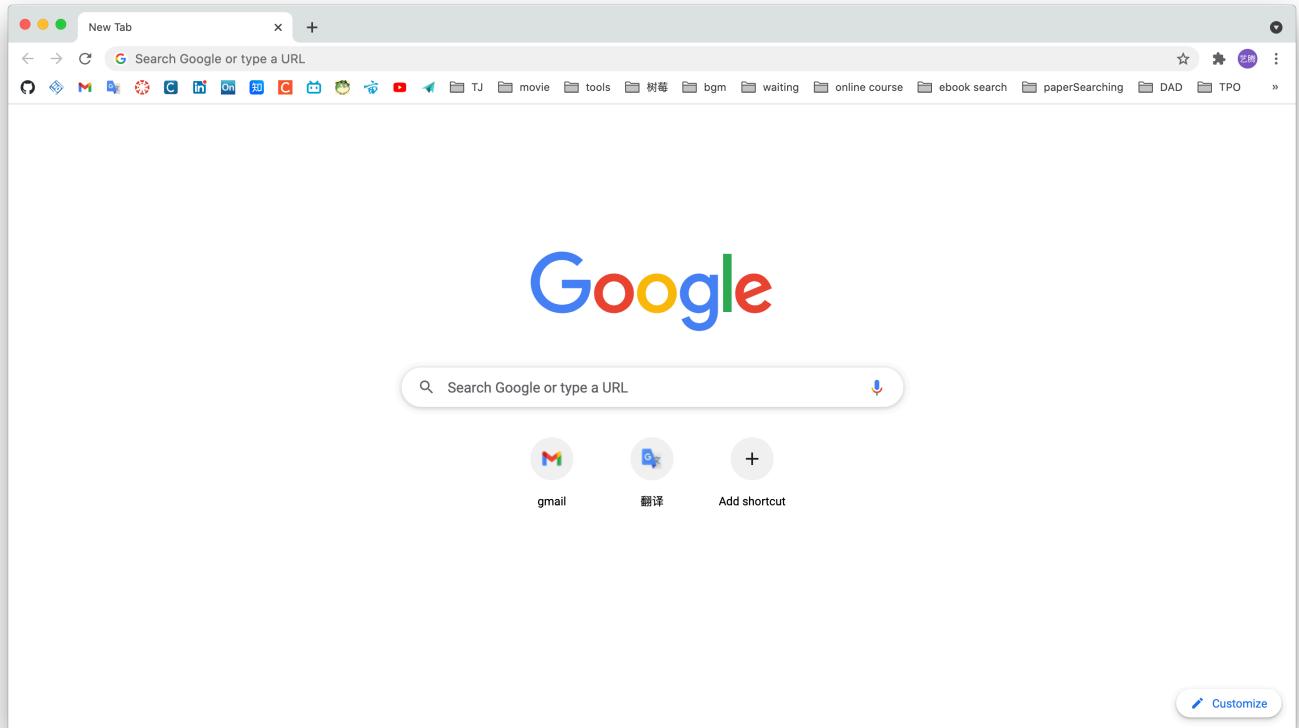
$$= f(x_i, y_i) + \nabla f(x_i, y_i) \begin{bmatrix} \Delta x \\ \Delta y \end{bmatrix}$$

$$= f(x_i, y_i) + \left[\frac{\partial f(x_i, y_i)}{\partial x}, \frac{\partial f(x_i, y_i)}{\partial y} \right] \begin{bmatrix} \Delta x \\ \Delta y \end{bmatrix}$$

- Calculate -> wake up the calculator



- Google -> open the google search web page <https://google.com>



3. Structure

```
├── myInterface.py
├── myVoiceAssistant.py
└── resources
    ├── .DS_Store
    ├── Lemon.mp3
    ├── assistant.gif
    ├── f94b357bbca7236f17ad0062c1c8e677.gif
    ├── healTheWorld.mp3
    ├── hellotimer.py
    ├── image_processing20200811-10212-4k57x2.gif
    ├── index.gif
    ├── light_ai_design_by_gleb.gif
    ├── listening.gif
    ├── nor2lis.gif
    ├── normal.gif
    ├── recognizing.gif
    └── rokid_inside_ai_by_gleb.gif
```