* + 1. **User-Agent伪装**

User Agent中文名为用户代理，简称 UA，它是一个特殊字符串头，使得服务器能够识别客户使用的操作系统及版本、CPU 类型、浏览器及版本、浏览器渲染引擎、浏览器语言、浏览器插件等。

那么，设置User Agent有什么用呢？

比如你在做移动APP开发时，有个网站在你手机端APP打开之后和直接在浏览器中打开之后看到的东西不一样，网页会根据UA判断你是app打开的还是直接浏览器打开的，如果没有找到事先商定的UA信息就认定这个链接是在浏览器打开的，如果查询到事先商定的UA就是用app打开的，两种情况可以让你看到不同的东西，做不同的操作，比如有些东西开发者只想让你使用app打开才能看见。

其实简单的说User-Agent就是客户端浏览器等应用程序使用的一种特殊的网络协议，在每次浏览器（邮件客户端/搜索引擎蜘蛛）进行 HTTP 请求时发送到服务器，服务器就知道了用户是使用什么浏览器（邮件客户端/搜索引擎蜘蛛）来访问的。既然是人为规定的协议，那么就是说不管什么浏览器，默认的UA都是可以更改的。有时候为了达到一些不可告人的目的，我就经常需要更改一下UA的设置，比如伪装一下浏览器类型，比如把浏览器伪装成手机上网。

**1．）浏览器的UA字串的标准格式**：

浏览器标识 (操作系统标识; 加密等级标识; 浏览器语言) 渲染引擎标识版本信息。但各个浏览器有所不同。

1、浏览器标识  
出于兼容及推广等目的，很多浏览器的标识相同，因此浏览器标识并不能说明浏览器的真实版本，真实版本信息在 UA 字串尾部可以找到。

2、操作系统标识



3、加密等级标识

N: 表示无安全加密  
I: 表示弱安全加密  
U: 表示强安全加密

4、浏览器语言  
在首选项 > 常规 > 语言中指定的语言

5、渲染引擎  
显示浏览器使用的主流渲染引擎有：Gecko、WebKit、KHTML、Presto、Trident、Tasman等，格式为：渲染引擎/版本信息

6、版本信息  
显示浏览器的真实版本信息，格式为：浏览器/版本信息

**2．）爬虫程序中的user-agent：**

**在user\_agent.py模块中：**

**import** random  
  
agents = [  
 **"Mozilla/5.0 (Linux; U; Android 2.3.6; en-us; Nexus S Build/GRK39F) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Avant Browser/1.2.789rel1 (http://www.avantbrowser.com)"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US) AppleWebKit/532.5 (KHTML, like Gecko) Chrome/4.0.249.0 Safari/532.5"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 5.2; en-US) AppleWebKit/532.9 (KHTML, like Gecko) Chrome/5.0.310.0 Safari/532.9"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US) AppleWebKit/534.7 (KHTML, like Gecko) Chrome/7.0.514.0 Safari/534.7"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.0; en-US) AppleWebKit/534.14 (KHTML, like Gecko) Chrome/9.0.601.0 Safari/534.14"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US) AppleWebKit/534.14 (KHTML, like Gecko) Chrome/10.0.601.0 Safari/534.14"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US) AppleWebKit/534.20 (KHTML, like Gecko) Chrome/11.0.672.2 Safari/534.20"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/534.27 (KHTML, like Gecko) Chrome/12.0.712.0 Safari/534.27"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/535.1 (KHTML, like Gecko) Chrome/13.0.782.24 Safari/535.1"**,  
 **"Mozilla/5.0 (Windows NT 6.0) AppleWebKit/535.2 (KHTML, like Gecko) Chrome/15.0.874.120 Safari/535.2"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/535.7 (KHTML, like Gecko) Chrome/16.0.912.36 Safari/535.7"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.0 x64; en-US; rv:1.9pre) Gecko/2008072421 Minefield/3.0.2pre"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.0.10) Gecko/2009042316 Firefox/3.0.10"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.0; en-GB; rv:1.9.0.11) Gecko/2009060215 Firefox/3.0.11 (.NET CLR 3.5.30729)"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 6.0; en-US; rv:1.9.1.6) Gecko/20091201 Firefox/3.5.6 GTB5"**,  
 **"Mozilla/5.0 (Windows; U; Windows NT 5.1; tr; rv:1.9.2.8) Gecko/20100722 Firefox/3.6.8 ( .NET CLR 3.5.30729; .NET4.0E)"**,  
 **"Mozilla/5.0 (Windows NT 6.1; rv:2.0.1) Gecko/20100101 Firefox/4.0.1"**,  
 **"Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:2.0.1) Gecko/20100101 Firefox/4.0.1"**,  
 **"Mozilla/5.0 (Windows NT 5.1; rv:5.0) Gecko/20100101 Firefox/5.0"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:6.0a2) Gecko/20110622 Firefox/6.0a2"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:7.0.1) Gecko/20100101 Firefox/7.0.1"**,  
 **"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:2.0b4pre) Gecko/20100815 Minefield/4.0b4pre"**,  
 **"Mozilla/4.0 (compatible; MSIE 5.5; Windows NT 5.0 )"**,  
 **"Mozilla/4.0 (compatible; MSIE 5.5; Windows 98; Win 9x 4.90)"**,  
 **"Mozilla/5.0 (Windows; U; Windows XP) Gecko MultiZilla/1.6.1.0a"**,  
 **"Mozilla/2.02E (Win95; U)"**,  
 **"Mozilla/3.01Gold (Win95; I)"**,  
 **"Mozilla/4.8 [en] (Windows NT 5.1; U)"**,  
 **"Mozilla/5.0 (Windows; U; Win98; en-US; rv:1.4) Gecko Netscape/7.1 (ax)"**,  
 **"HTC\_Dream Mozilla/5.0 (Linux; U; Android 1.5; en-ca; Build/CUPCAKE) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (hp-tablet; Linux; hpwOS/3.0.2; U; de-DE) AppleWebKit/534.6 (KHTML, like Gecko) wOSBrowser/234.40.1 Safari/534.6 TouchPad/1.0"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; en-us; sdk Build/CUPCAKE) AppleWebkit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.1; en-us; Nexus One Build/ERD62) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; Nexus One Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; en-us; htc\_bahamas Build/CRB17) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.1-update1; de-de; HTC Desire 1.19.161.5 Build/ERE27) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; Sprint APA9292KT Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; de-ch; HTC Hero Build/CUPCAKE) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; ADR6300 Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.1; en-us; HTC Legend Build/cupcake) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; de-de; HTC Magic Build/PLAT-RC33) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1 FirePHP/0.3"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.6; en-us; HTC\_TATTOO\_A3288 Build/DRC79) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.0; en-us; dream) AppleWebKit/525.10 (KHTML, like Gecko) Version/3.0.4 Mobile Safari/523.12.2"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; en-us; T-Mobile G1 Build/CRB43) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari 525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.5; en-gb; T-Mobile\_G2\_Touch Build/CUPCAKE) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.0; en-us; Droid Build/ESD20) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; Droid Build/FRG22D) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.0; en-us; Milestone Build/ SHOLS\_U2\_01.03.1) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.0.1; de-de; Milestone Build/SHOLS\_U2\_01.14.0) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 3.0; en-us; Xoom Build/HRI39) AppleWebKit/525.10 (KHTML, like Gecko) Version/3.0.4 Mobile Safari/523.12.2"**,  
 **"Mozilla/5.0 (Linux; U; Android 0.5; en-us) AppleWebKit/522 (KHTML, like Gecko) Safari/419.3"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.1; en-gb; dream) AppleWebKit/525.10 (KHTML, like Gecko) Version/3.0.4 Mobile Safari/523.12.2"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.0; en-us; Droid Build/ESD20) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.1; en-us; Nexus One Build/ERD62) AppleWebKit/530.17 (KHTML, like Gecko) Version/4.0 Mobile Safari/530.17"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; Sprint APA9292KT Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-us; ADR6300 Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 2.2; en-ca; GT-P1000M Build/FROYO) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 3.0.1; fr-fr; A500 Build/HRI66) AppleWebKit/534.13 (KHTML, like Gecko) Version/4.0 Safari/534.13"**,  
 **"Mozilla/5.0 (Linux; U; Android 3.0; en-us; Xoom Build/HRI39) AppleWebKit/525.10 (KHTML, like Gecko) Version/3.0.4 Mobile Safari/523.12.2"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.6; es-es; SonyEricssonX10i Build/R1FA016) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
 **"Mozilla/5.0 (Linux; U; Android 1.6; en-us; SonyEricssonX10i Build/R1AA056) AppleWebKit/528.5 (KHTML, like Gecko) Version/3.1.2 Mobile Safari/525.20.1"**,  
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**print** random.choice(agents)