

# Maintenance Plan

## Freshman Starter Kit

### Public Deployment Charge

We plan to use PythonAnywhere for deploying our site. PythonAnywhere is an online integrated development environment and web hosting service based on the Python programming language. We plan to use the “Web Dev” paid plan of PythonAnywhere which is \$12/month and has enough power to run a typical of 150,000 hit/day website on each web app. There is 5GB of disk space available to use.

### Plans and pricing

Hacker	\$5/month	Web dev	\$12/month	Startup	\$99/month	Custom	\$5 to \$500/month
Run your Python code in the cloud from one web app and the console		If you want to host small Python-based websites for you or for your clients		Start a business and don't worry about having to scale to handle traffic spikes		Want a combination that's not on the list? Create your own! All custom plans have:	
A Python IDE in your browser with unlimited Python/bash consoles		A Python IDE in your browser with unlimited Python/bash consoles		A Python IDE in your browser with unlimited Python/bash consoles		A Python IDE in your browser with unlimited Python/bash consoles	
One web app on a custom domain or <code>your-username.pythonanywhere.com</code>		Up to 2 web apps on custom domains or <code>your-username.pythonanywhere.com</code>		Up to 3 web apps on custom domains or <code>your-username.pythonanywhere.com</code>		Up to 20 web apps, on custom domains or <code>your-username.pythonanywhere.com</code>	
Enough power to run a typical 100,000 hit/day website. <a href="#">(more info)</a>		Enough power to run a typical 150,000 hit/day website on each web app. <a href="#">(more info)</a>		Enough power to run a typical 1,000,000 hit/day website on each web app. <a href="#">(more info)</a>		As many web workers as you need to scale your site's capacity. <a href="#">(more info)</a>	
2,000 CPU-seconds per day for consoles, scheduled tasks and always-on tasks <a href="#">(more info)</a>		4,000 CPU-seconds per day for consoles, scheduled tasks and always-on tasks <a href="#">(more info)</a>		10,000 CPU-seconds per day for consoles, scheduled tasks and always-on tasks <a href="#">(more info)</a>		Up to 100,000 CPU-seconds per day for consoles, scheduled tasks and always-on tasks <a href="#">(more info)</a>	
iPython/Jupyter notebook support		iPython/Jupyter notebook support		iPython/Jupyter notebook support		iPython/Jupyter notebook support	
1GB disk space		5GB disk space		50GB disk space		As much disk space as you choose	
<a href="#">Switch Now</a>		<a href="#">Switch Now</a>		<a href="#">Switch Now</a>		<a href="#">Switch Now</a>	

Figure 1: PythonAnywhere Plans and Pricing

Right now, our website is mainly for EECS students. However, later we plan to add/modify features so that all KU students can use it. In the future, we also plan to

market the website to other universities as well. If so, we will consider changing the plan to either “Start Up (1,000,000 hit/day website on each web app and 50GB disk space)” or “Custom” (No limit on either).

## Turning Our Product Into a SaaS Solution

These days, websites are increasingly hosted via the Software as a service (SaaS) model of cloud computing. The SaaS model is when a third-party provider like PythonAnywhere hosts applications and makes them available over the Internet, as described by Tech Target. This promotes getting rid of physical servers and instead moving to a cloud storage approach, which need not be managed by the product developers.

## Software Developers

Currently anyone can post whatever they like on our website by visiting the “Advice” section of our webpage. It is crucial that someone monitors what gets posted so that people cannot post whatever they like at their own liberty. We plan to hire a software developer to develop an AI that filters the posts. Maybe by looking at the words used and seeing if the posts are actually helpful to the students at the University.

The software developer will also be responsible for getting the API of classes.ku.edu or Enroll and Pay to automatically update the classes that freshman need to enroll into.

This would be helpful as we would not need to hire a moderator admin in this case. If we plan to hire a developer, annually we will have to pay him/her \$70,743 (PayScale).

## Moderator Admin

If it is not immediately possible for us to hire a developer, we plan to hire a moderator admin who will manually go through the posts and comments and approve them. So, anything posted will first be sent to the moderator and then, once approved, it will be made public on the website. The moderator will also be responsible for keeping in contact with the university and getting information about any freshman classes being moved to different buildings. If this is the case, the moderator should update building coordinates. Another thing the moderator will be responsible for is getting information from the university about any change of freshman classes or prerequisites. Based on the information received from the university, the moderator will be responsible for updating the classes in the “Rate My Class” part of our website.

If we hire someone for this, annually we would have to pay the moderator approximately \$50,645 (ZipRecruiter).

## DB SQLite Storage Space Charge

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. The code for SQLite is in the public domain and is thus free for use for any purpose, commercial or private. SQLite is

the most widely deployed database in the world with more applications than we can count, including several high-profile projects.

For this project we are using SQLite. Further down the road, in order to keep our website running, we need to take into consideration the amount that SQLite will charge us. We would be required to pay \$1500/year for an Annual Maintenance Subscription plan. Through this maintenance plan, it is possible to communicate directly and privately (via email) with the developers of SQLite and receive fast and authoritative answers to technical questions about SQLite. It is also possible to receive advice on schema, query design, optimization, design and implementation of applications using SQLite. It is important for us to be a part of this maintenance plan so that any bugs we report or express concern over will be given priority handling and will be fixed right away. (Refer to Figure 2, for details about the Annual Maintenance Subscription plan)

## **Services Included**

The following are the services you can receive with an annual maintenance subscription:

- You can communicate directly and privately (via email) with the developers of SQLite and receive fast and authoritative answers to technical questions about SQLite.
- You can talk directly and privately with the SQLite developers to receive advice on schema and query design and optimization and on the design and implementation of applications using SQLite.
- We will be happy to advise you on how to do custom builds of SQLite to meet your specific requirements.
- Any bugs you report or express concern over will be given priority handling and will usually be fixed right away.
- If your support needs increase, you can escalate your level of support with a single phone call.
- We will send you send you tarballs or ZIP archives containing the very latest (unreleased) source code to SQLite upon request.
- We will listen attentively to any concerns or suggestions you have about future plans for SQLite and give your remarks considerable weight in making our decisions.

Figure 2: Details about the Annual Maintenance Subscription plan

We will also pay \$6000 one time fee for the SQLite License. This is for the warranty of title and perpetual right-to-use for the SQLite source code. SQLite is free and most people use it without any kind of license or support. However, if we plan for other universities to use our website, legal proof of our right to use SQLite, is something that we would want.

## Google Maps API

A potential future addition for our project would be using Google Maps API to provide instant navigation based on the classes the student chooses. Pricing for maps, routes and places is pay as you go and only pay for what we want. Google provides a recurring \$200 credit on the billing account each month to offset the usage costs. It is also possible to set usage limits to protect against unexpected cost increases.

SKU	\$200 MONTHLY CREDIT EQUIVALENT FREE USAGE	MONTHLY VOLUME RANGE (PRICE PER THOUSAND)		
		0–100,000	100,001-500,000	500,001+
<a href="#">Mobile Native Static Maps</a>	Unlimited loads	\$0.00	\$0.00	<a href="#">CONTACT SALES</a> for volume discounts.
<a href="#">Mobile Native Dynamic Maps</a>	Unlimited loads	\$0.00	\$0.00	
<a href="#">Embed</a>	Unlimited loads	\$0.00	\$0.00	
<a href="#">Embed Advanced</a>	Up to 14,000 loads	\$14.00	\$11.20	
<a href="#">Static Maps</a>	Up to 100,000 loads	\$2.00	\$1.60	
<a href="#">Dynamic Maps</a>	Up to 28,000 loads	\$7.00	\$5.60	
<a href="#">Static Street View</a>	Up to 28,000 panos	\$7.00	\$5.60	
<a href="#">Dynamic Street View</a>	Up to 14,000 panos	\$14.00	\$11.20	

Rates in the pricing charts above are based on your monthly usage, determined at the end of each month. For simplicity, prices listed are per 1,000 calls; note that on your bill, you incur a charge for each call, not for each 1,000 calls. For each billing account, a monthly \$200 USD Google Maps Platform credit is available and automatically applied to the qualifying SKUs. [Additional currencies](#) may be available within the console. When you select a different currency, rates will convert from the USD equivalent listed here.

Figure 3: Details about Pricing for Google Maps API

We would take into consideration the dynamic maps pricing. This would allow upto 28,000 loads. The monthly volume range (price per thousand) would be \$7.00 for ranges between 0 - 100,000. This would be the cost we would have to cover after using the \$200 credit given by Google. For more details about the plan and how the pricing would change if the monthly volume range would be different, refer to Figure 3.