

# Seat Critique: Deployment Plan

Team GitGud

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## 1 Introduction

Seat Critique is bathroom reviewing app designed by Team GitGud to allow KU students to rate and review the various bathrooms located throughout KU's campus.

## 2 Steps To Deployment

Steps necessary to ensure a successful deployment of Seat Critique include:

- Purchasing a domain name
- Purchasing a hosting service plan
- Acquiring an SSL certificate
- Refinement and quality assurance
- Populating database with most popular restrooms on campus
- Advertising

### 2.1 Domain Name

For starters, a domain name must be purchased. For Seat Critique, we currently own and use the domain <http://seat-critique.gitgud-ku.com>. However, we would probably end up purchasing <http://seat-critique.com> if we were to expand further. According to Google Domains, the <http://seat-critique.com> domain could be purchased for \$12.00 per year.

### 2.2 Hosting

For convenient hosting, Seat Critique would likely continue to be hosted on heroku, however we would need to upgrade from our current free-tier service model up to one of the paid levels. The lowest paid tier of Heroku offers consistent uptime (free-tier servers may be put to sleep when not in use) and faster service for \$7.00 per dyno per month. I expect that three should support Seat Critique just fine, so I would expect \$21.00 per month in hosting costs which would come to \$252.00 in yearly hosting costs.

### 2.3 SSL certificate

One feature of Seat Critique is our SeatSeek™ feature which pulls in a user's current location, and then guides them to the building nearest them to find a bathroom as soon as possible. In order to use this feature however, the Seat Critique website is required to have an SSL certificate.

Acquiring an SSL certificate is thankfully quite simple nowadays with Let's Encrypt's free and automated SSL certification combined with the Electronic Frontier Foundations Certbot automatic installation. Thus this process will actually carry no cost to our deployment.

### 2.4 Refinement and Quality Assurance

Although we were able to fix many issues with our product prior to our December 1<sup>st</sup> deadline, there are still a few bugs in production that would need to be fixed before releasing Seat Critique to the broader public. In order to find and resolve all of these issues, our team would need to hire one dedicated tester for at least 20 hours of work, which at \$10 an hour, would cost us \$200. In addition, Seat Critique is not free for us to develop. It costs us time and we should be compensated as such. Assuming we pay ourselves at least \$20 an hour for at least 20 more hours of work each, our development team's costs would come to \$1,600 in order to wrap up our project. Total predicted refinement and quality assurance costs then add up to a total of \$1,800.

### 2.5 Bathroom Populating

Seat Critique currently requires users to enter in bathrooms on their own. This was a choice made by Team GitGud because we know that we would be incapable of locating every bathroom on campus ourselves, so we wanted to allow users to be able to make a submission for even the most obscure restroom on campus. However, we believe that the most highly-trafficked bathrooms on campus should be ready and visible for users to critique without having to enter in the information for those bathrooms themselves.

Therefore I suggest that our team and other friends of ours should preemptively walk through campus and enter in the information for the most popular locations ourselves. I believe this would take a group of 10 students approximately 3 hours each to cover most of campus. This could be done mostly by volunteers, but just in case, we will allocate \$225 to this task so these works could at least make minimum wage.

### 2.6 Advertising

As great as Seat Critique is, it isn't any good if nobody knows about it! Therefore advertising and marketing is especially important for the successful launch of our product. One of our top ideas for marketing our product is the creation of small fliers containing QR codes that could be taped the insides of stall doors across campus that would link to the Seat Critique pages for the specific restrooms that those fliers are in. This would mean hiring a designer to create such fliers. We assume this cost to be \$300.

To print our fliers, we could use any simple printing service, such as Vistaprint. Assuming 500 5 inch by 7 inch flyers, printing costs should be approximately

\$50. Once the fliers are printed and received, we will then be able to hire 10 students to put up posters throughout campus for two hours each at minimum wage for a total poster-posting cost of \$150.

### 3 Costs

This section is a concise breakdown of all of our estimated project costs, separated into yearly-recurring costs and one-time costs of deployment.

#### 3.1 Yearly

The following table contains our expected yearly costs that we would need to begin paying as soon as our application was deployed.

Item	Quantity	Cost/Unit	Total
Domain Name	1	\$12	\$12
Heroku Dynos	3	\$84	\$252
Grand Total	\$264		

#### 3.2 One-Time

This table contains our expected one-time costs necessary to get our application off the ground and available to as many users as possible.

Item	Quantity	Cost/Unit	Total
Testing	20 hrs	\$10	\$200
Refinement	80 hrs	\$20	\$1,600
Bathroom Populating	30 hrs	\$7.50	\$225
Ad Design	1	\$300	\$300
Flyer Printing	500	\$0.10	\$50
Flyer Posting	20 hrs	\$7.50	\$150
Grand Total	\$2,525		

## 4 Services Used for Creation and Deployment

Seat Critique would not be possible without many of these excellent services, so in this section I would like to elaborate on what each of these services are, why we chose them, and how we use them.

#### 4.1 Ruby on Rails



Ruby on Rails is a full-stack web development framework built with the Ruby programming language. Ruby on Rails allows us to develop web applications very rapidly with a well-defined application structure. We selected Ruby on Rails due to our positive experience with it during Project 1.

As an additional note about Ruby on Rails, the community, documentation, and support is phenomenal, and saves us a great deal of development time. Oftentimes when our team comes across a problem that requires us to build a solution, we are able to find and download a gem (ruby library) that has nearly the exact functionality we were hoping for, with much greater support and stability than anything we could have written ourselves in such a short time.

## 4.2 Docker



Docker is a containerization platform that we chose to use to help maintain consistent development environments between all of our personal development machines, as well as any future production environments. Docker's containers are essentially lightweight linux virtual machines that allow us to completely package up our application and all of our software dependencies in a way that ensures that the application runs identically within Docker containers on all other machines. This eliminates essentially all environment-specific bugs and issues so we can focus on what is most important to us in the first place: Building a great app!

## 4.3 Heroku



Heroku is a web-hosting platform aimed primarily at smaller organizations and startups. As such, Heroku puts a great deal of focus in creating a very affordable and easy-to-use platform. It also allows to easily scale up our application whenever demand increases.

## 4.4 Google Maps



Google Maps is an industry-leading consumer mapping software with a very mature, configurable API, which we used to build our map interface on the main page of Seat Critique's web application. We originally selected Google Maps for its reliability and high-quality documentation, however we also came to find its configurability to be quite useful in allowing us to customize our map to make it as memorable as we could make it.

## 4.5 Let's Encrypt



Let's Encrypt is a free and automated SSL certification authority. Although we did not use Let's Encrypt in Project 4, Let's Encrypt would almost certainly be our chosen method of obtaining Seat Critique's SSL certificate. As mentioned earlier, Seat Critique requires an SSL certificate in order to ask for a user's location for our SeatSeek<sup>TM</sup> feature to work. SSL also helps us to ensure better security for all of our users and their personal bathroom-usage information.

## 5 Conclusion

In conclusion, Seat Critique needs little more than a little fine tuning, some faster web hosting, and coordinated and dedicated advertising effort to take off as a full-fledged application. Pretty soon you could start seeing Seat Critique's advertising fliers hanging from the backs of all of your favorite stall doors across campus.

Keep on critiquing!

Sincerely,  
Team GitGud