

STUDENT

Eloy Martinez

NANODEGREE

Front-End Web Developer

COURSE

Website Performance Optimization

Dear Eloy,

Congratulations on finishing the project!

Below, we have some comments about your project to help you meet specifications for your next version. I also have suggestions for you to improve your page in the future.

Again, fantastic job on the final project so far! This project review serves as a great learning opportunity to improve your project and reinforce good habits. We look forward to seeing your upgraded version.

Best,  
Mark and the Udacity Team  
frontend-project@udacity.com

[Click here to tell us how helpful was this feedback!](#)

**Critical Rendering Path****Exceeds Specifications**

- Student identifies and performs optimizations to achieve a PageSpeed score above 90.

**Framerate****Meets Specifications**

- Student identifies and performs optimizations ensuring a consistent framerate at 60fps.
  - To further improve your framerate, you could use CSS3 hardware acceleration to speed up the pizza animations:

<http://www.html5rocks.com/en/tutorials/speed/html5/>

Here is another article to read up on `requestAnimationFrame()`

<http://www.html5rocks.com/en/tutorials/speed/animations/>

We can reduce paint time by using backface-visibility: hidden in the mover class. This forces the browser to render each moving pizza on a separate layout, preventing us from painting the entire screen every time a pizza moves.. There are tradeoffs to using this hack because this forces the GPU (video card) to render the pizzas instead of our CPU. If the video card has low memory, such as a GPU on a mobile device, performance can be worse.

Furthermore, do we necessarily need to create or animate 200 pizzas if only a handful of the pizzas are visible on the browser at any given time?

### **Content Efficiency** **Meets Specifications**

- Student identifies and performs optimizations impacting content efficiency.

### **Computation Efficiency** **Does Not Meet Specifications**

- Time to resize pizzas is greater than 5ms in pizza.html shown in the browser console.
  - `changePizzasizes()` function is sub-optimal. Try to `console.log()` all of the variables that are being calculated inside the For loop and figure out which variables need to be calculated inside the For loop and which variables do not necessarily need to be calculated for every iteration of the For loop.

### **Comments** **Meets Specifications**

- Comments are present and effectively explain longer code procedures.

### **Documentation** **Meets Specifications**

- A README file is included detailing all steps required to successfully run the application.

## PROJECT EVALUATION

**Project Does Not Meet Specifications**