

Zachary Amador (zea@cs)

Kimyen Truong (kimyen@cs)

CSE403 Project Proposal

Furniture Finder

I. Vision

Customers want to try a product before buying it. This is why fashion stores have fitting rooms. For furniture, it is harder to “see how it fits” in your space. So often someone gets exhausted from looking at all the tables on a website to find some tables that have the dimensions they want, then struggling to compare them. After all this, they might wonder if there is another table that has a better price, or fits better, on another website. Even after buying a table they might not end up being satisfied with how it fits in their space.

We provide a better solution for them: Furniture Finder is where a user can enter the dimensions and/or price range they desire. Our app will recommend a list of appropriately-sized furniture from different sources. It will also have the capability of visualizing how the furniture would look in their space before they purchase it.

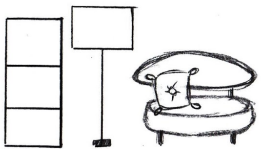
II. Software Architecture

The architecture of the furniture finder consists of two main parts. One is a front-end web application that displays the UI and handles taking user parameters and displaying search results. The other part is the back end, a server-side program that will actually carry out furniture search queries. This will be linked to a database of the available furniture from multiple manufacturers. The server side will handle querying the database for furniture, and then sorting the results of the query based on some metric of how well each piece of furniture fits the search parameters.

The front-end UI will also be able to display details for any given piece of furniture in the database, and to display comparisons between multiple pieces. The server will handle getting this information out of the database and sending it back to the web app.

People who are interested in front-end development will have a chance to sharpen their skills, and people who are interested in databases will be able to work with real data in a real-world application.

We propose to build our web app on Amazon EC2, using Nginx, PHP, MySQL Server, and either Flash or HTML5 Canvas. It will probably involve other toolkits as well.



Find your Furnitures

Width x Length x Height From To

1st recommended product's Picture

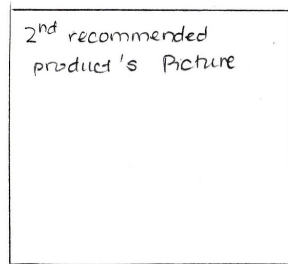


Product Name
 Company
 Dimensions
 Color
 Other properties

\$ Price

Add to compared List

2nd recommended product's Picture



Product Name
 Company
 Dimensions
 Color
 Other properties

\$ Price

Add to Compared List

III. Challenges and Risks

Collecting the necessary data (scraping multiple furniture manufacturers' websites for images, dimensions, and prices for many categories of furniture) could prove to be difficult and time-consuming. In a real-world application, it would probably be easier to get these manufacturers to provide said data, but it's likely that some would be reluctant to provide all this information so that an unaffiliated company could provide a service that compares their products against those of their competitors.

Ideas for Stretch Features/Extensions:

We could provide a tool to take a set of multiple furniture items, as well as room dimensions, which would generate different arrangements of the furniture (i.e. suggest layouts). This would require implementing some way to draw a room's dimensions and door positions, so some kind of simple 2D CAD -- it could be a lot of work just to implement that part of this feature.