

# Assignment P1

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## Question 1:

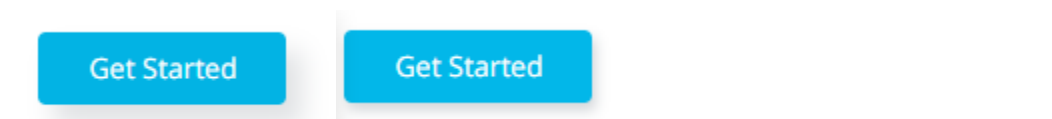
Udacity is a streaming service offered to individuals where they can learn about a variety of different topics within the realm of computer science and analytics. It's interface has to account for a plethora of users who's experience behind a computer might not be known. Due to that fact, there must have been a considerable effort taken to carefully design and develop their website in order to keep it accessible to all people with access to a computer.

Human roles that are often considered when designing a service can be broken down into 3 models, firstly the processor model, where it's designing around the users ability to take in sensory input and then return output. Using this approach we can see on the Udacity website that certain things were used. One noticeable detail related to the processor model is how on the "Program Catalog" page the category headers are bolded with their respective courses slightly smaller and normal font (Figure 1.1), being able to categorize things allows a user to click on let's say the Data Science category and be brought to all the topics mentioned below it. Being able to get to all the categories below simplifies a user having to search thus getting them to the information they need quicker, which is ultimately the goal.



**Figure 1.1:** The bold font of the categories above their respective courses makes for a much simpler visual stimulation of the user.

The predictor model is used want you to be able to anticipate results of actions you take. An initial detail that stands out is all the buttons on the Udacity website when hovered over the shadow lessens (Figure 1.2). This technique would be used to indicate to the user that something is there, and that by clicking the button they might “uncover” another action. That coupled with a title overlayed on the button allowing the user to know where they might be led on press, which is immediately reinforced once the user does click by redirecting. Another thing on the UI that would suggest predictor modeling is how the search bar has a magnifying glass interlayed (Figure 1.3). A magnifying glass is often times synonymous with searching for something, and when coupled with an input field would lead the user to believe that what they enter into said field will return results.



**Figure 1.2:** Although subtle the shading on the button without the mouse hovering (Left), gets retracted and almost disappears behind the button when the mouse is over it (Right)



**Figure 1.3:** The magnifying glass posted to the left is an indicator that this field is used to search information, and would be especially helpful for users who don't speak English.

The improvements of the processor model would never have taken into account such things as adding images to fields or shadows to buttons anticipating a user to understand. Both of these predictor model intentions would be beneficial especially to very novice individuals on a computer. While the processor model intentions of having sublists and categories, and buttons as different colors lead the user to take an action more quickly, whether that be finding the correct course or just clicking the “My Classroom” button.

## Question 2:

One interface that I constantly notice myself going to is Google Maps, a GPS that offers a multitude of views, depths and angles to look at maps. I use this application in a multitude of contexts, sometimes I use said app when getting walking directions from location to location. Attention span is a constraint to using it in this context, namely because in the real world when walking around it's normally on crowded streets and sidewalks passing people, animals, and objects the like. Therefore I can't afford to spend every single second looking down at my screen just to make sure I get where I'm going. Google overcame this context by offering visual distance to your next direction on the map, and estimated time to next direction. They even auditorially give you your next direction at certain distance intervals.

Another time when I'm using this app is exploring where I would like to go when relaxing on the couch, a constraint here is that I may be entirely unfamiliar with an area and what to do. So Google will, when zoomed in properly, post business names, restaurants and even mark out parks a very handy tool when you don't know what to do within a particular location (Figure 2.1).



**Figure 2.1:** As mentioned the ability to see shop names and the surrounding location makes for a much more friendly user experience when discovering the area.

The most common context in which I am using this application is when I am driving my car from place to place. With increased speeds and constant need to split

my attention between the road and where I am going the app must perform in a way where I don't have to fiddle with it and still get the necessary directions. The designers of this app do that by constantly updating your location on the map, showing you what's ahead (accident, slowdown, police, etc.), and even showing you curvature in the roads. These second by second updates allow this app to be usable in an otherwise unusable context.

Albeit an already exceptional application, from its ability to handle multiple contexts very well, there are a few tweaks that could be added into the application. A voice command structure would be beneficial when driving in ones car to be able to update routes without having to take hands or eyes off of the road for a large amount of time. Another such enhancement would be if there was a way for the application to warn the user of upcoming weather similar to that of traffic. Allowing a user to know that thunderstorms are in the area might stop many users from continuing on their current path and find an alternate route.

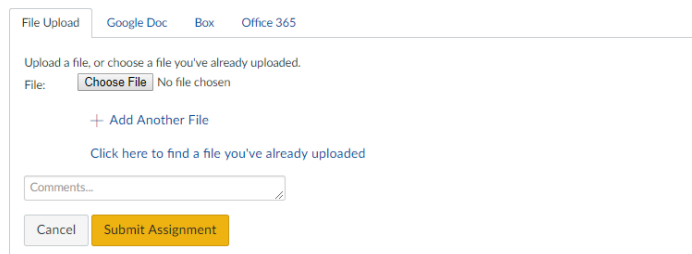
### Question 3:

One of the many things required for students of Human Computer Interaction to do is to submit weekly assignments. For the context of this question we will consider the submission of an assignment as the goal that the user is trying to leverage Canvas ("world") to accomplish, describing the feedback loops established by the application that we the user would use to interpret progress and decide next actions.

To execute our goal on Canvas we will start off on the Assignment P1 page. In our stepping through the Gulf of Execution we start in the *planning* phase, where Canvas helps the student by clearly labeling a button as "Submit Assignment". And if that's not enough the button is an ugly yellow to help attract the users attention to it. If designers used predictive modeling for their users it would *specify* that on click, the button would lead us to submit the assignment. *Performing* the click, Canvas does some processing and immediately a field below pops up.

This leads us to the Gulf of Evaluation Phase. *Percieving* the new field requires the user to *interpret* about what the new fields purpose is. And during a *comparison* with the goal the user can determine that the goal is not complete.

So starting execution processes again, there's a button in the new field that says "choose file", it doesn't stand out quite as much but the button description allows the user to quickly plan, behave and perform clicking said button (Figure 3.1). This time it leads to a window popup where all the users files are located like most traditional file upload processes. The user evaluates this information and again determines that it is not the goal.

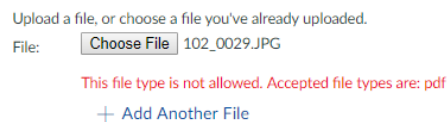


**Figure 3.1:** This is the interface displayed to user after clicking the "Submit Assignment" button, as you can see the Choose File button would be difficult to distinguish if not for the display text.

The process of choosing the file is a behavioral level of processing, since it is a learned behavior of most computer users of how to navigate through their folders and find the correct files. Once the file is found and opened by the user, the file explorer modal disappears and if the user chose the correct file type, it's now displayed in the same submission window. On the chance that the user selects an incompatible file type, a red message is shown saying "this file type is not allowed" (Figure 3.2). Through the gulf of evaluation users would obviously perceive the message and quickly be able to interpret and realize that the goal was not completed, thereby bringing them back to the GOExec phase. Another indicator is that the "Submit Assignment" button is now greyed over a common use of unclickable resources.

If the user selects a proper file the process is different in that they can now click the submit button and receive a confirmation on the right hand margin. Letting them evaluate that the goal is now completed.

One takeaway for Canvas would be the positioning of a lot of these resources, and the jumping around. From the file submission window being so far down you have to scroll to only giving the users small feedback in the right hand margins and in very bland color.



**Figure 3.2:** The aforementioned red font, notifying the user that they made an incorrect action in selecting a file. The red text accentuates the error and results in a narrower Gulf Of Evaluation.

## Question 4:

I had an experience recently where I had to file a claim through my car insurance, and I decided to give it a try on their web application. My lack of insurance knowledge and terminology made the process much more difficult when combined with their lengthy and often time confusing application. Understandably due to the all of the variations, and laws solving the goal of making a simple claims reporting process becomes daunting. When going through the GEICO mobile app, the initial login drops you off with so many different options on the page. Just navigating through to find what I wanted started off making the gulf of execution very difficult. So it made the initial planning phase of the gulf of execution quite difficult, already being a confused customer not knowing where to start made it that much more challenging. After probing and finding the “Claims” section of the application I was presented with choosing what kind of accident I was involved in, where again the amount of information presented to the user was overwhelming, there had to be almost 40 different choices displayed in an unorganized manner. After choosing accident type and going through some personal details, I was dropped onto this new interface with no indication of if I’d done everything correctly or if they were ever going to reach out. So after a confusing gulf of execution process, this application was also lacking on the gulf of evaluation process. I ended up having to call and had a much more thorough and enjoyable experience over the phone.

A similar activity to filing a claim, would be like when I recently filed my taxes through HR Blocks application. They start the user off by allowing them to scan their W2, where that process alone gives you plenty of notice that the user completed it by showing them a giant green circle. Just the photo alone allowed for a simpler gulf of execution, prefilling much of the data in the coming questions. After the photo upload process the user is taken through a series of simple questions, where they break down many of the terms and have a completion progress bar on the side. After answering each category of questions they check off the category on the aforementioned progress bar, allowing for a much more clear gulf of evaluation for the user. Also limiting the amount of information displayed on screen at any one time allowed for the initial phases of the gulf of execution (Planning and Specifying) to be completed.

There were some solid features on the HR Block application that I think could translate nicely over to GEICO's application to narrow the gap in the gulf of execution. For starters there was definitely a need for a restriction on the amount of content displayed to the user at any one time that I think would greatly benefit GEICO in the future much like it has HR Block. Another feature that would bring much aid to the customer, and that would make choosing the type of accident that is occurred would be if some how GEICO could implement a photo upload of scenes of an accident where based on key data points they could determine the type of loss that had happened. Understandably scanning a W2, and creating a service that can determine accident types are completely different beasts it would reduce the confusion on the gulf of execution for the users immensely.

A couple of things that GEICO could inherit from HR Block on the other side of the gulf would be the progress bar shown to users on the side. Knowing how far from completion, and how the user is doing would be very useful on the evaluation end. Just the constant positive reinforcement of the green check letting me know I completed something properly led to an almost visceral level of processing that I was on the right path.

Another thing that could be considered to narrow both gulfs but more closely relates to the gulf of execution was the simple leading questions asked by HR Block, unlike

all of the complicated insurance jargon used on GEICO, these questions really made the user feel like they were going to make the proper choice when performing.