Parker Hague

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Course Name

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Assignment 1

1. Some applications require specialized software engineering techniques for several different reasons. Two of the more obvious reasons are the software cost of the application and the functional reasons for the application.
   1. Software costs can have a huge effect on how software engineering is done. A piece of software that is dynamic and users interact with may take more weekly or monthly maintenance than a backend application running on a server that doesn’t need as many changes. An example of this could be developers constantly working on Facebook’s UI, but the server running the application is able to be deployed and doesn’t have to be changed as often. This is how software costs can directly affect software engineering techniques.
   2. The functional reason for an application has to do with the purpose of the application. The purpose will dictate just how much time and energy will be used on the app and what the development techniques will look like. For example, the software in our cars that handles the deployment of airbags is built for the purposes of safety with a priority in speed. Conversely, a platform like Facebook is not designed with safety or speed in mind. Instead, the developers of Facebook spent more time working on the UI. This illustrates how different apps have different functions and priorities.
   3. **PUBLIC** – An example of this could be industry leaders taking steps to safely guide the development of artificial intelligence such that artificial intelligence never becomes an adversary to humankind.
   4. **CLIENT** **AND** **EMPLOYER** – An example of this is when I’m working at my programming job. It is my duty and responsibility to ensure that any and all security vulnerabilities are terminated and that I’ve done everything in my power to protect the end user from any malicious cyber wrongdoing.
   5. **PRODUCT** – To me, this one just sounds like submitting quality work. An example of this is working extra hard on a front-end UI to make a user’s experience the best it can be.
   6. **JUDGEMENT** – Do you think what you’re doing is right or wrong? An example of this one is using good judgement and doing the right thing at work even when a coworker may not be doing the right thing. It takes integrity to do the right thing even when no one is watching.
   7. **MANAGEMENT** – This one applies to my managers (although I could be considered a leader). An example of this one could be a manager choosing a costlier decision over another because the costlier decision is more ethical than the cheaper one.
   8. **PROFESSION** – This is one that any software developer can do. An example of this one is creating a computer science YouTube channel to promote computer science and help get others interested in the subject. Here, this helps the profession and the public.
   9. **COLLEAGUES** – This is an easy one. This can be helping a colleague with a bug or helping them think through a certain problem. Today I had to ask a colleague for help because I was trying to use a library that we didn’t have the dependency for. My coworker helped me fix the problem very fast and was supportive.
   10. **SELF** – This one is about continuing to learn and being ethical in the profession. I have an easy example of this. I watch programming YouTube videos almost every day of my life. I watch these videos so I can always be learning something new about computer science and programming. I will be upholding this clause as long as I remain ethical with my software engineering adventures and I promote that ethicality.
2. There are several societal challenges with these machines. The biggest and most obvious ones are privacy concerns. These drones are able to fly anywhere they want and maneuver with ease. If a drone is flying around a neighborhood with a camera attached, this can lead to a number of privacy issues. What if the camera is able to see in a window into a person’s home? What if someone wants to lay out in the privacy of their backyard and sun bathe naked? The unregulated nature of these machines is a problem when someone is able to put a camera in places they usually cant.

Another issue these drones possess is that fact that they can fly anywhere unregulated. What if a drone decided to fly into car traffic and caused a wreck? What if a drone was somehow able to affect an airplane? Most of these issues could be solved with regulation. Unfortunately, issues arise in life when people are allowed to do whatever they want without regulation.