1. Introduce yourself and share with your peers your background and any experience you have with data science. **(1 mark)**

Hi. I am Ujwal. I am in my early 20's and come from an undergraduate degree background in Civil Engineering. The reason I opted for the course was "a knack for newer initiatives in the technology field". The way I understood "Data Science", I think I do have some experience with it. I have used curve fitting software like CumFreq to understand to determine best fit model for available data to determine the amount of rainfall in a particular year and to understand the trend (increase or decrease) in precipitation over the years. Another example includes studying the flow in a river channel to determine maximum flood in 100 or 1000 years and based on those analytics determine the size of infrastructures to handle the flood for developing hydropower projects and safety of nearby community.

1. Based on the videos and the reading material, how would you define a data scientist and data science? **(3 marks)**

According to my understanding, a data scientist is someone skilled at performing two jobs. First is the skill to formulate a problem, select data source with a possible answer and then mine the data to obtain the solution. Second, is the ability to present the solution in the language of the final implementation. For instance, Walmart through crowdsourcing asked data scientists to determine the relationship between consumer behaviour and distress caused by natural events like earthquakes. Data scientists used the sales data and found consumers were interested in buying "pretzels" on such days. Following the suggestion, Walmart placed "pretzels" near the counter on those days and found a significant increase in sales.  
  
"Data science is what data scientists do". What I understand of this definition is that data science includes of all the process the data scientist put the data through including formulating a story for the data in the language of implementation.

1. As discussed in the videos and the reading material, data science can be applied to problems across different industries. What industry are you passionate about and would like to pursue a data science career in? **(1 mark)**

I am particularly interested in the field of ITS - Intelligent Transportation System. I believe the ability to provide intelligence to mechanical instruments comes from data collected from human behaviour using those mechanical instruments over a number of years. Neural networks/ Deep learning is probably the field of data science that will help me with the process.

1. Based on the videos and the reading material, what are the **eight** main components of a report that would be delivered at the end of a data science project? **(5 marks)**

The eight main components of a report, delivered at the end of a data science project are the following:  
  
1. Cover page: including the title of the report, name of authors, their affiliations, and contacts, name of the institutional publisher, and the date of publication  
  
2.Table of Contents (TOC): providing a glimpse of what lies in the report  
  
3. Abstract: explaining the crux of the arguments  
  
4. Introduction and literature review: for setting up the problem and explaining the gap in information or study on the problem to justify the need for the current study  
  
5. Methodology: explaining how this study aims to fill the gaps  
  
6. Results: numerical and graphical information obtained from the study  
  
7. Discussion: narrative to the implications of the results. for example, the value of r=0.9 shows a high degree of correlation between two variables  
  
8. Conclusion: where you narrate your solution to the problem in the common language of the people  
  
9. Housekeeping