**Problem Statement:**

Mashable is a global, multi – platform media and entertainment company. Powered by its own proprietary technology, Mashable is the go-to source for tech, digital culture and entertainment content for its dedicated and influential audience around the globe. Just like any other media company its success depends on the popularity of articles. And one of the key metrics to measure popularity is number of shares done on the article.

Over the period of few years, Mashable has collected data on around 40, 000 articles. The goal is to do analysis and modelling to predict the number of shares of an article given the input parameters.

**Fields in the dataset:**

Attribute Information:

Number of Attributes: 61 including target column -- shares

Attribute Information:

0. url: URL of the article

1. timedelta: Days between the article publication and the dataset acquisition

2. n\_tokens\_title: Number of words in the title

3. n\_tokens\_content: Number of words in the content

4. n\_unique\_tokens: Rate of unique words in the content

5. n\_non\_stop\_words: Rate of non-stop words in the content

6. n\_non\_stop\_unique\_tokens: Rate of unique non-stop words in the content

7. num\_hrefs: Number of links

8. num\_self\_hrefs: Number of links to other articles published by Mashable

9. num\_imgs: Number of images

10. num\_videos: Number of videos

11. average\_token\_length: Average length of the words in the content

12. num\_keywords: Number of keywords in the metadata

13. data\_channel\_is\_lifestyle: Is data channel 'Lifestyle'?

14. data\_channel\_is\_entertainment: Is data channel 'Entertainment'?

15. data\_channel\_is\_bus: Is data channel 'Business'?

16. data\_channel\_is\_socmed: Is data channel 'Social Media'?

17. data\_channel\_is\_tech: Is data channel 'Tech'?

18. data\_channel\_is\_world: Is data channel 'World'?

19. kw\_min\_min: Worst keyword (min. shares)

20. kw\_max\_min: Worst keyword (max. shares)

21. kw\_avg\_min: Worst keyword (avg. shares)

22. kw\_min\_max: Best keyword (min. shares)

23. kw\_max\_max: Best keyword (max. shares)

24. kw\_avg\_max: Best keyword (avg. shares)

25. kw\_min\_avg: Avg. keyword (min. shares)

26. kw\_max\_avg: Avg. keyword (max. shares)

27. kw\_avg\_avg: Avg. keyword (avg. shares)

28. self\_reference\_min\_shares: Min. shares of referenced articles in Mashable

29. self\_reference\_max\_shares: Max. shares of referenced articles in Mashable

30. self\_reference\_avg\_sharess: Avg. shares of referenced articles in Mashable

31. weekday\_is\_monday: Was the article published on a Monday?

32. weekday\_is\_tuesday: Was the article published on a Tuesday?

33. weekday\_is\_wednesday: Was the article published on a Wednesday?

34. weekday\_is\_thursday: Was the article published on a Thursday?

35. weekday\_is\_friday: Was the article published on a Friday?

36. weekday\_is\_saturday: Was the article published on a Saturday?

37. weekday\_is\_sunday: Was the article published on a Sunday?

38. is\_weekend: Was the article published on the weekend?

39. LDA\_00: Closeness to LDA topic 0

40. LDA\_01: Closeness to LDA topic 1

41. LDA\_02: Closeness to LDA topic 2

42. LDA\_03: Closeness to LDA topic 3

43. LDA\_04: Closeness to LDA topic 4

44. global\_subjectivity: Text subjectivity

45. global\_sentiment\_polarity: Text sentiment polarity

46. global\_rate\_positive\_words: Rate of positive words in the content

47. global\_rate\_negative\_words: Rate of negative words in the content

48. rate\_positive\_words: Rate of positive words among non-neutral tokens

49. rate\_negative\_words: Rate of negative words among non-neutral tokens

50. avg\_positive\_polarity: Avg. polarity of positive words

51. min\_positive\_polarity: Min. polarity of positive words

52. max\_positive\_polarity: Max. polarity of positive words

53. avg\_negative\_polarity: Avg. polarity of negative words

54. min\_negative\_polarity: Min. polarity of negative words

55. max\_negative\_polarity: Max. polarity of negative words

56. title\_subjectivity: Title subjectivity

57. title\_sentiment\_polarity: Title polarity

58. abs\_title\_subjectivity: Absolute subjectivity level

59. abs\_title\_sentiment\_polarity: Absolute polarity level

60. shares: Number of shares (target)

1. Identify and define the problem statement clearly also mention why it is necessary for an organisation to solve the problem.
2. Define any hypothesis if possible.
3. Do the EDA of dataset and explain every step and the observation you got form the dataset?
4. Develop a machine learning algorithm.