# Question 1:

## Parts 1 and 2:

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## Part 3:

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## Part 4:

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# Question 2:

## Part 0:

A close up of a logo

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## Part 1:

### Sub-Part 1

A close up of a device

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### Sub-Part 2

Note that I have not included denominator calculation here since I do not know what to substitute as p(x)

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### Sub-Part 3

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## Part 2:

### Sub-Part 1

See Code for more

### Sub-Part 2

See code for implementation

### Sub-Part 3

A close up of a logo

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### Sub-Part 4

A close up of a logo

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### Sub-Part 5

Again, I should note I have not computed p(x) (denominator) here. I understand these numbers are very small. I was not able to figure out why this happens. As you can see further, the accuracy of the model is acceptable thou

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### Sub-Part 6

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## Part 3:

The MLE model has done much better in terms of time complexity and performance. I believe this is because we have a fairly big dataset that allows the model to learn properly the trends in data.