Dealing with Outliers

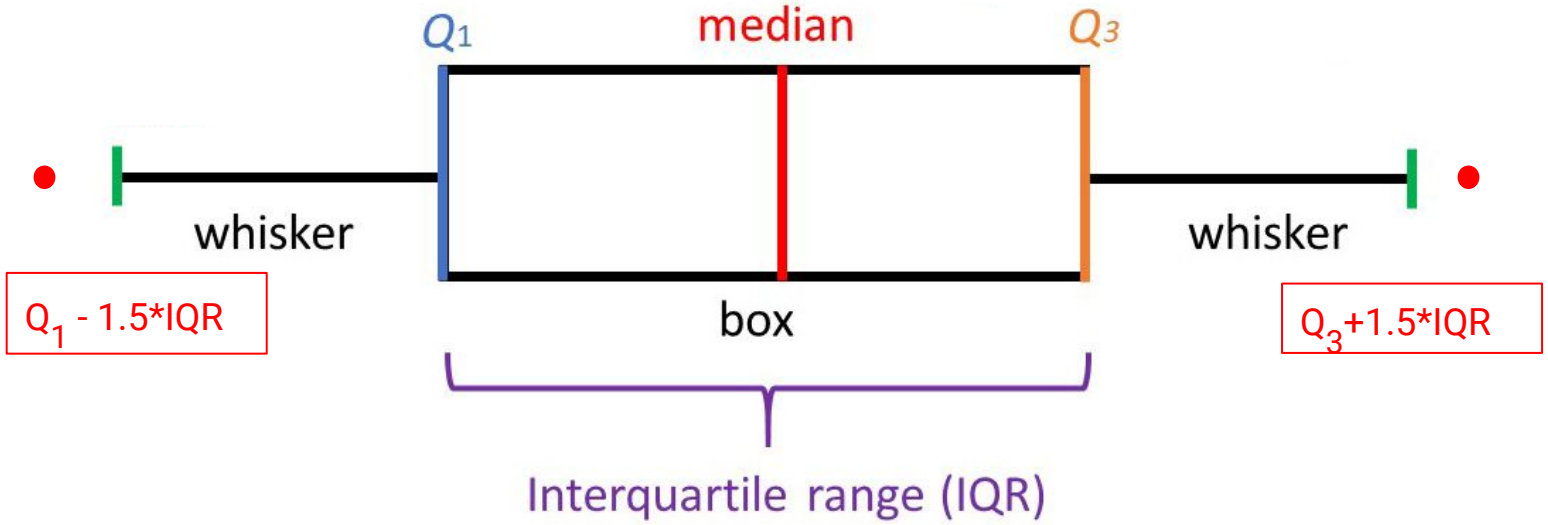
Outliers

Extreme(large or small) values relative to other observations

Reasons for Outliers Values

- Human Error
- Measurement Error
- Experimental Error
- Intentional Outlier
- Sampling Error
- Actual Outliers

Identifying Outliers



Analytics Vidhya
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Dealing with Outliers

- Delete the data points
- Replace Outliers
  - Using central tendency
  - Relationship with other Variables
  - Replace with whisker values
  - Using an ML model
- Transform the values
  - Variable transformation
  - Binning

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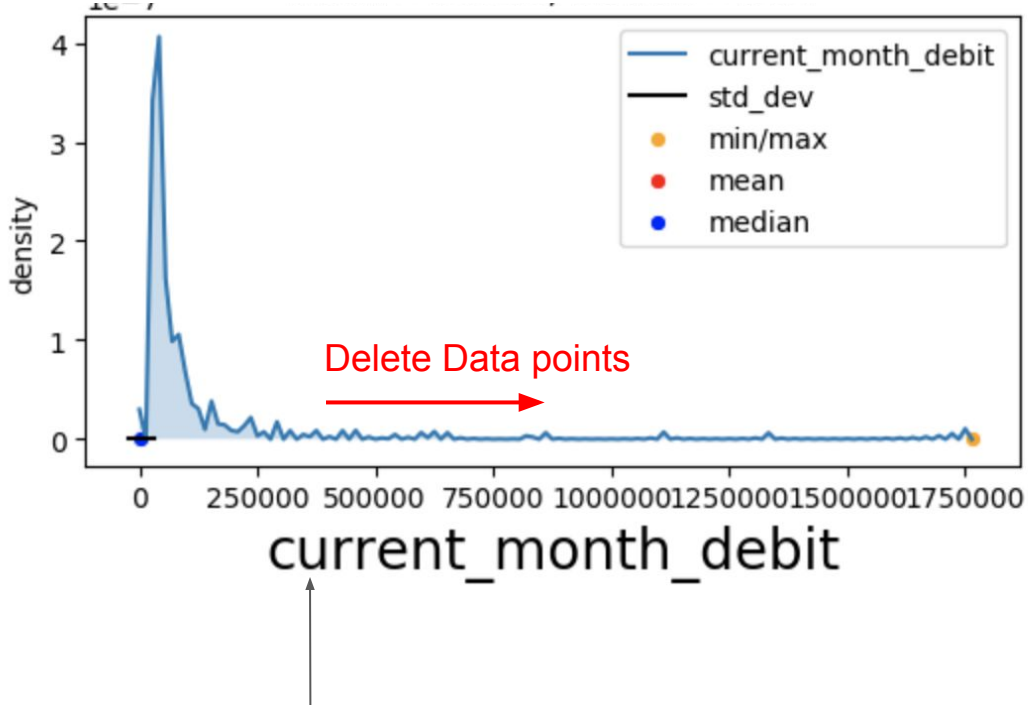

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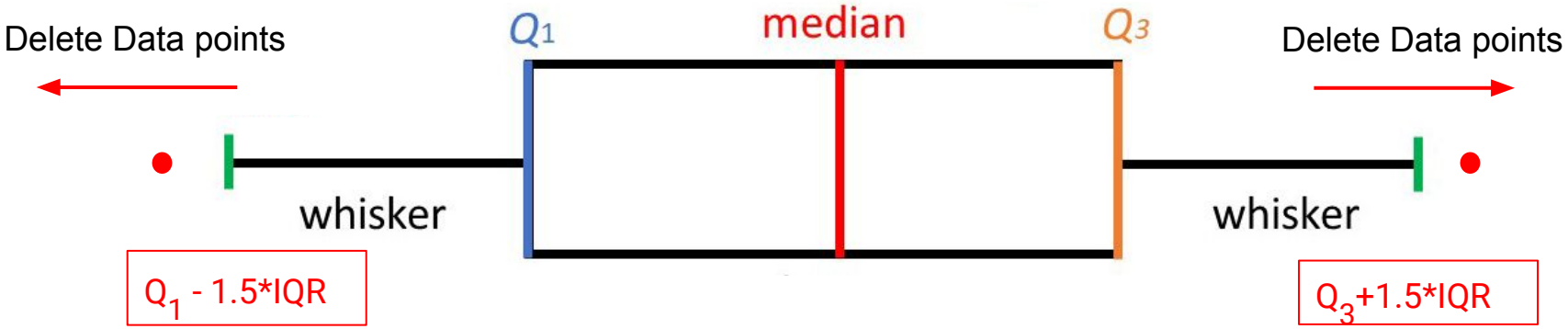

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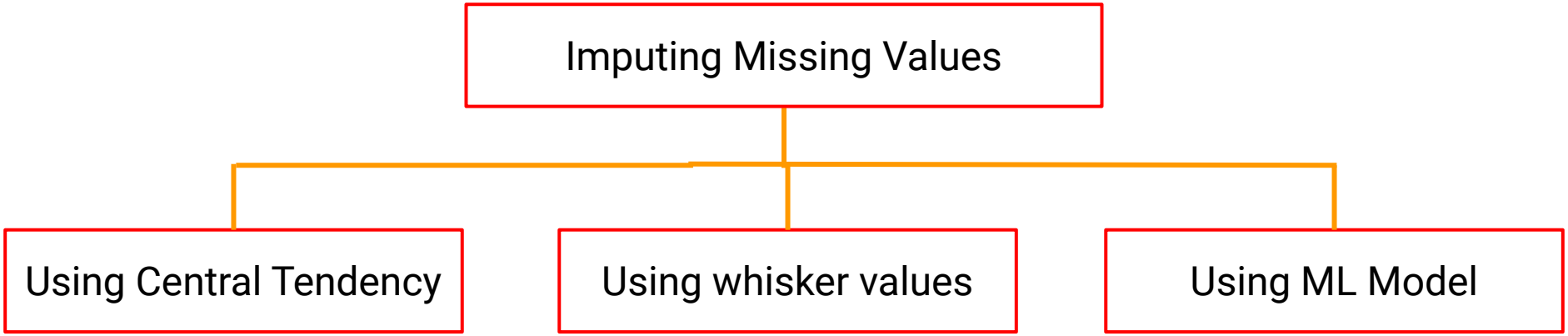

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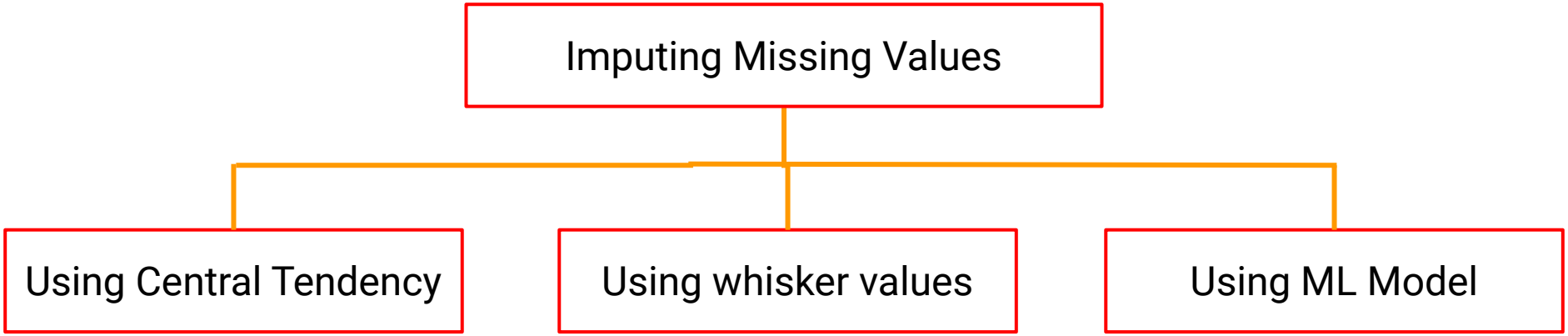

- Categorical - Mode
- Numerical - Median

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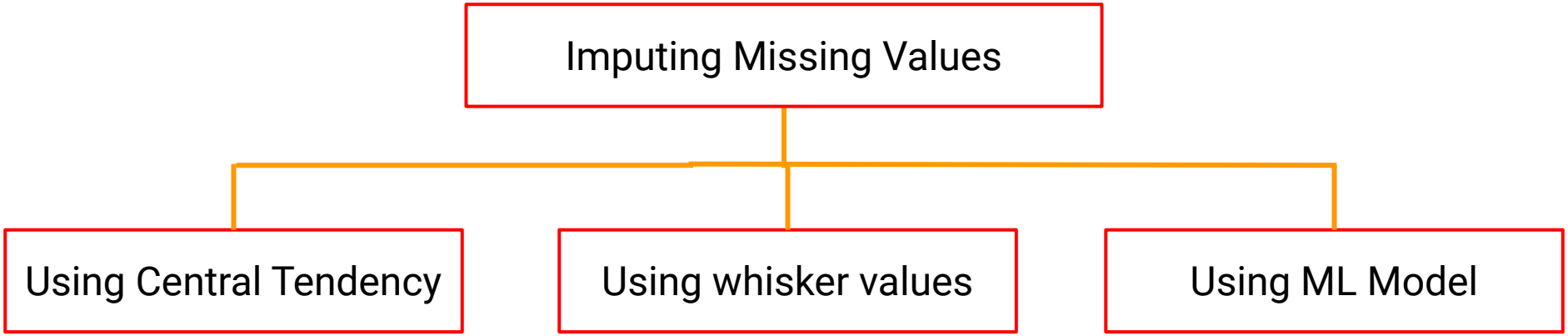

- Lower end - Q1 - 1.5*IQR
- Upper end - Q3 - 1.5*IQR

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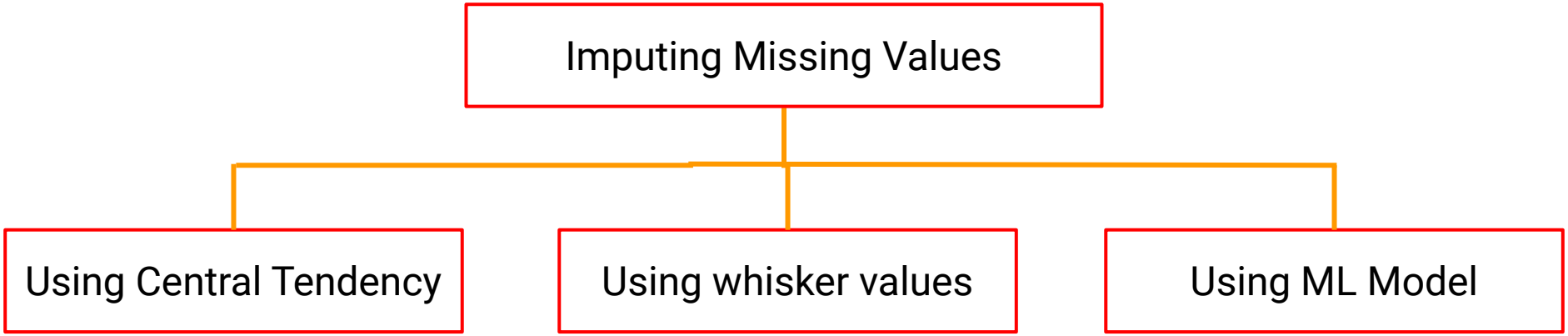

- Target -Column with Outlier
- Features - Other Attributes

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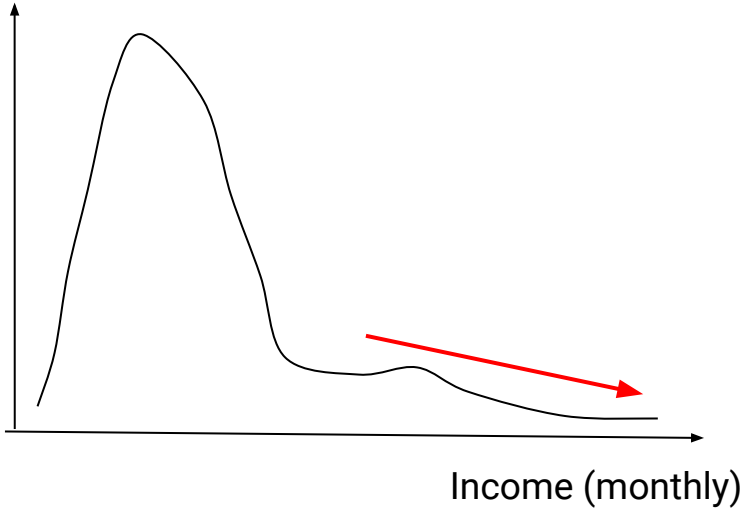
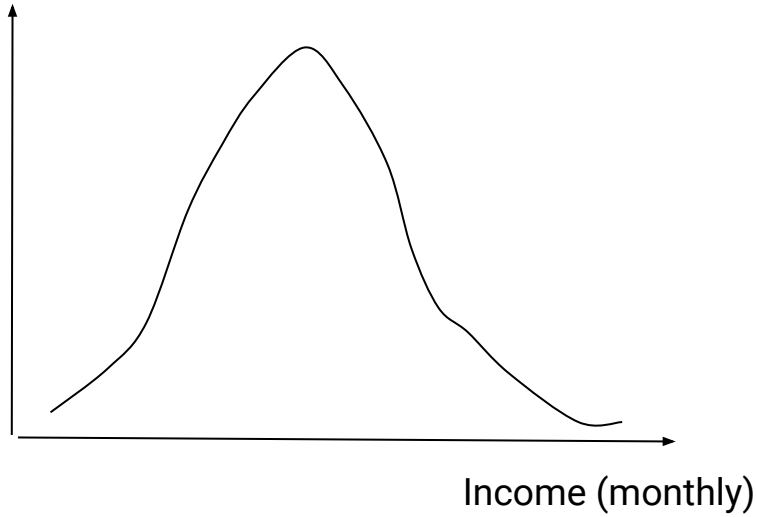
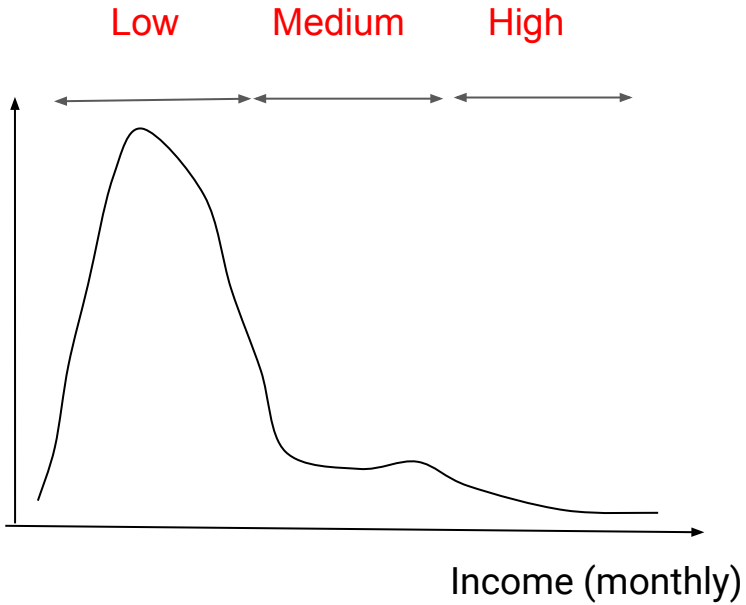
Variable Transformation





Binning Values



Thank You!

Delete Observations with Extreme Value

Notebook