Curve Fitting

Shravika Pinna-EEE
Bhargava Ravali Koganti-EEE
Ravali Thombrapu-ECE

BVRIT Hyderabad

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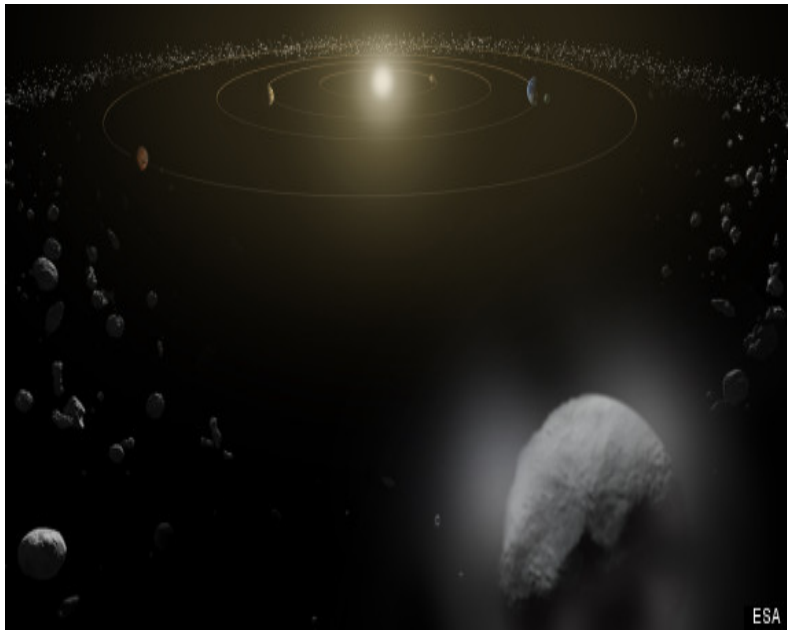
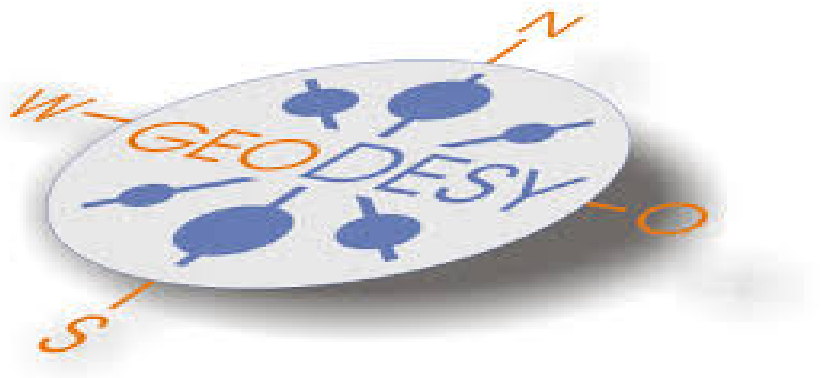
Origin





- Regression Analysis

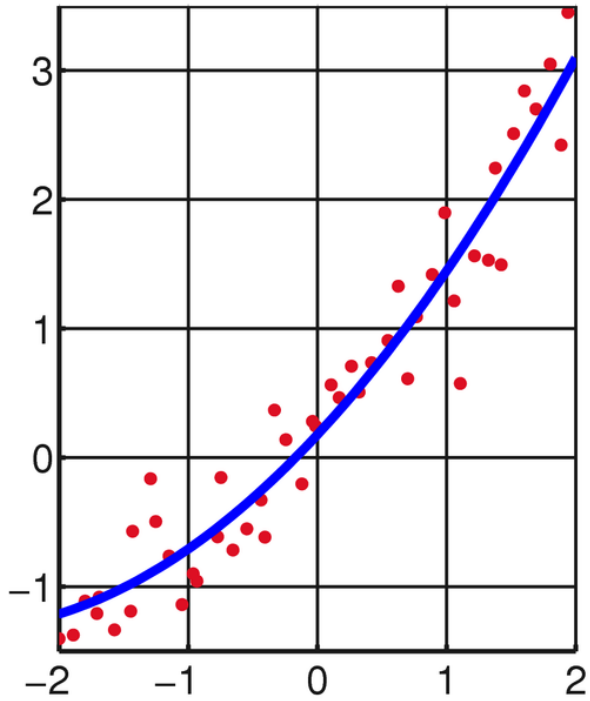
Definition

- Curve Fitting is the process of constructing a curve that has the best fit to a series of data points.

Problem Statement

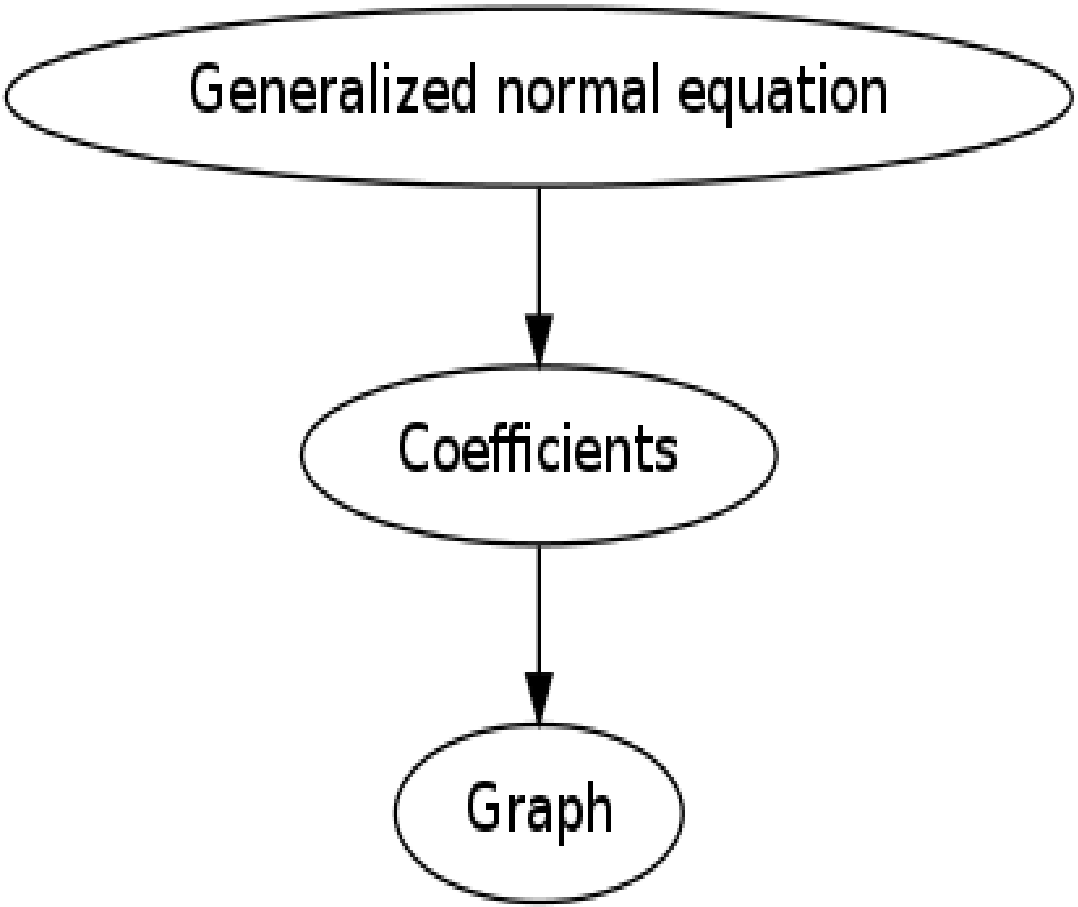
For the given X and Y values and the nature of curve, find the best least square curve fit and plot the graph.

Graph



$$SS_{(residuals)} = \sum_{i=1}^{n} (y_i - \hat{y}_i)^2$$

Approach



Functions Used

- User defined functions
  - SUM-XY()
  - coefficient()
  - function()
- Inbuilt functions
  - polyfit()
  - poly1d()
  - linspace()
  - plot()

Implementation

- Astronomy
- Atmosphere
- Educational and Industrial

What we have Learnt

- matplotlib
- scipy
- Teamwork

Tools Used

Statistics

- Developed 2 codes for this project
- 71 lines-user defined()
- 30 lines-inbuilt()

Conclusion

- Used python
- Implemented code
- Obtained graph


Thank
You!