Multivariate Regression 101

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Univariate Linear Regression

$$y = b + m * x1$$

Slope-Coefficients

Multivariate Linear Regression

$$y = b + m_1 * x_1 + m_2 * x_2 + ... + m_n * x_n$$

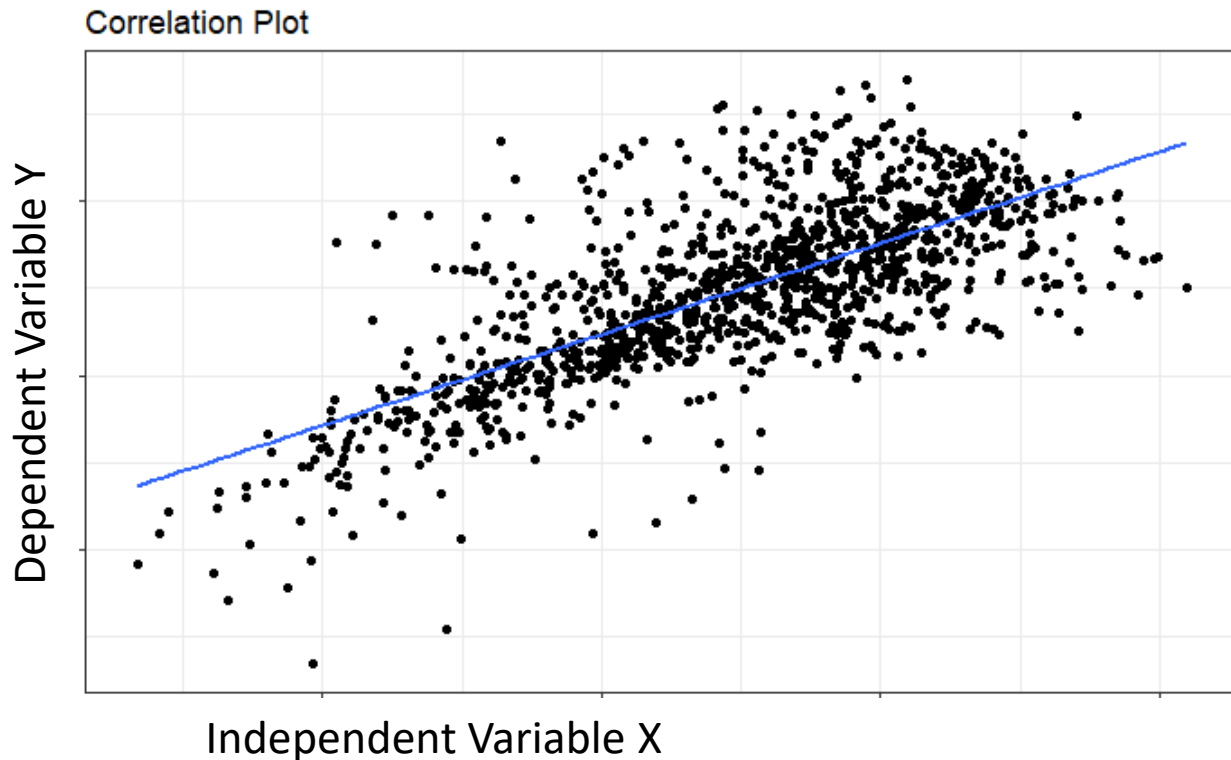Target Variable

Independent Variables

Example: House
Price = $b + m_1 * Size + m_2 * Age + ... + m_n * Quality$

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Model-Assumptions

- **Linearity**
- Homoscedasticity
- No Multicollinearity
- Multivariate Normality

Correlation Plot
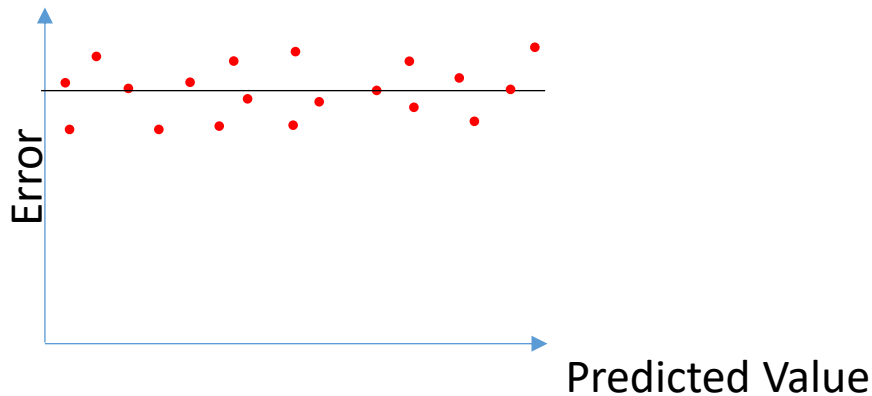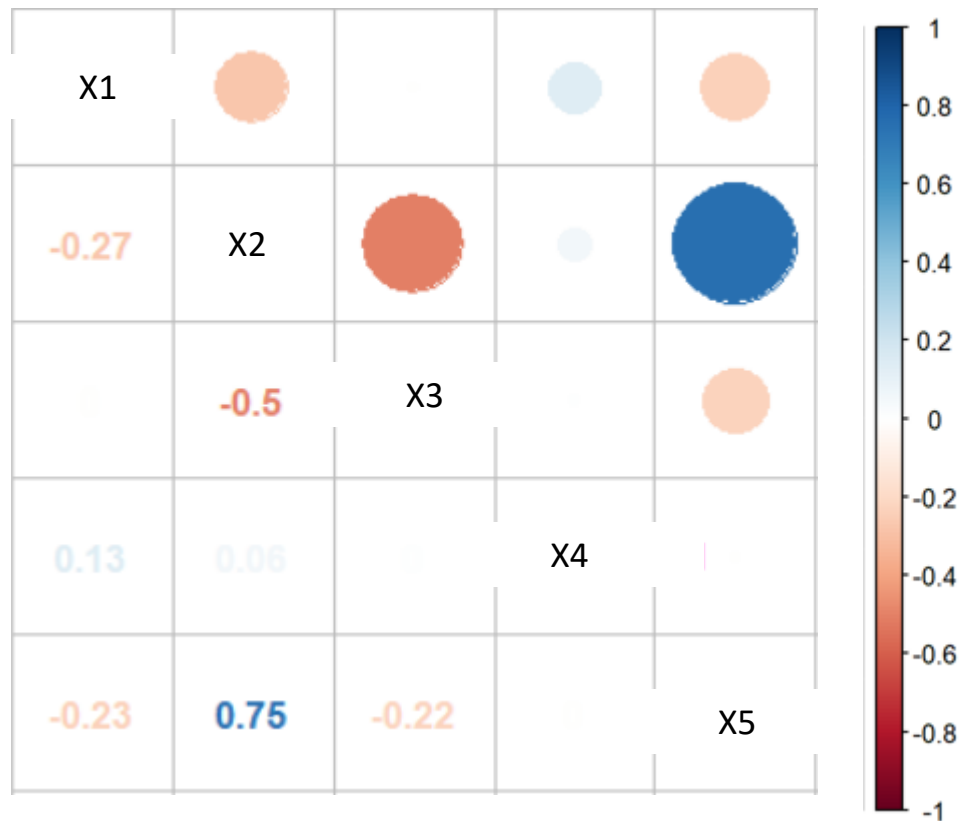
Dependent Variable Y

Independent Variable X

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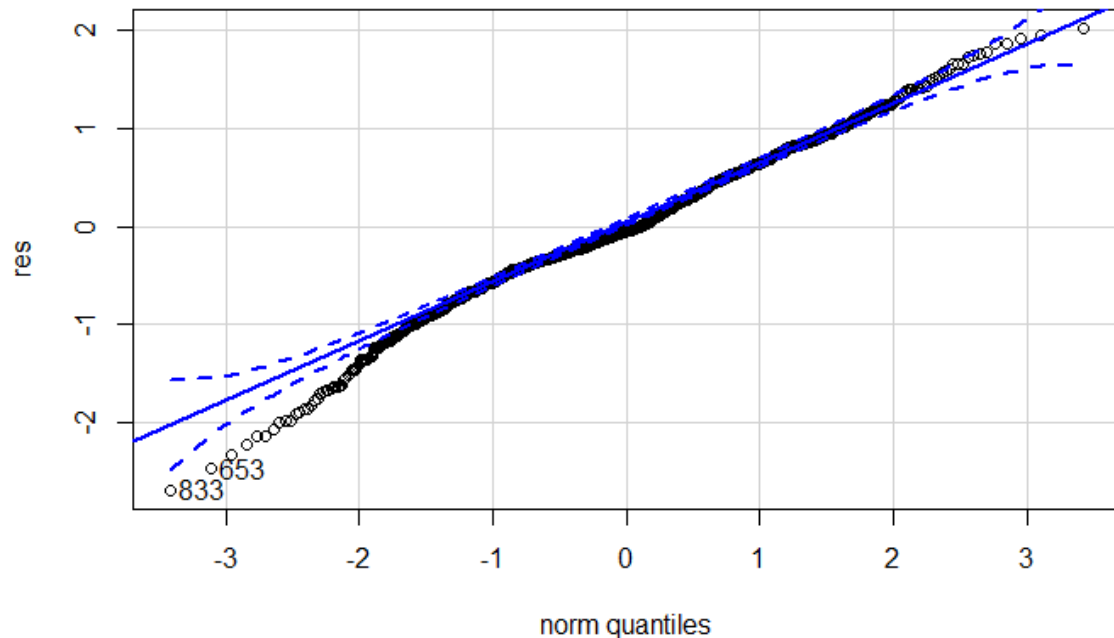# Multivariate Regression 101

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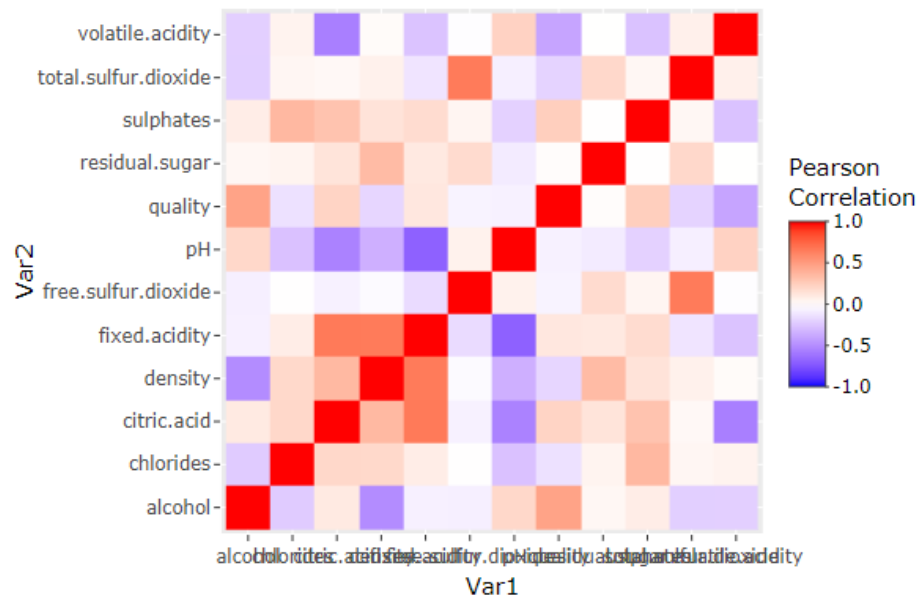
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