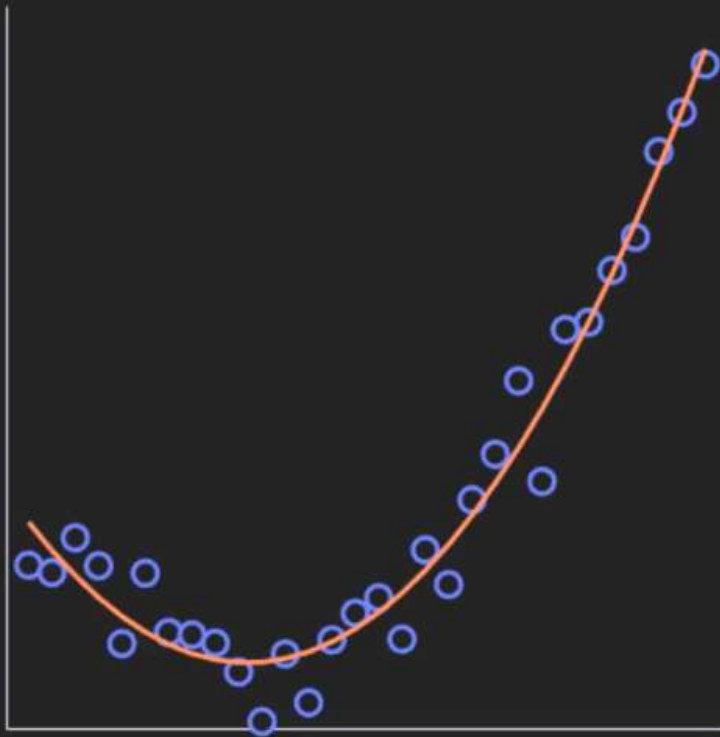
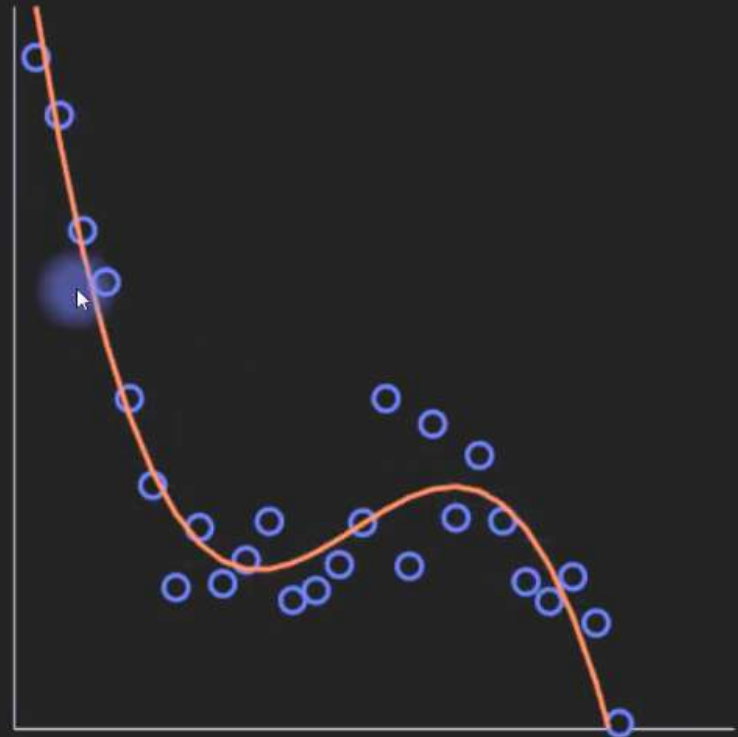


When would you use a polynomial regression?

Second-order polynomial

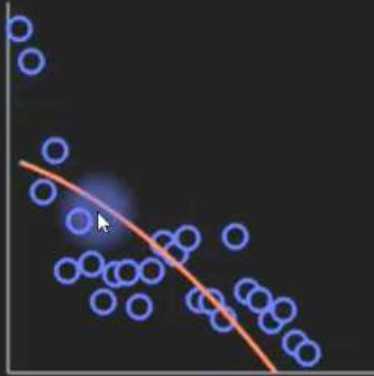


Third-order polynomial

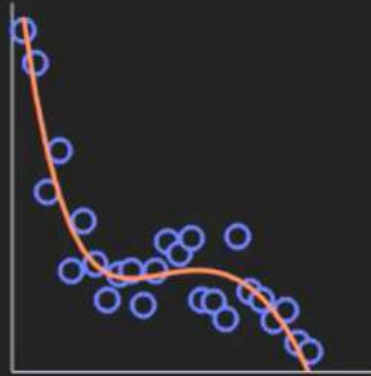


Which order should you use?

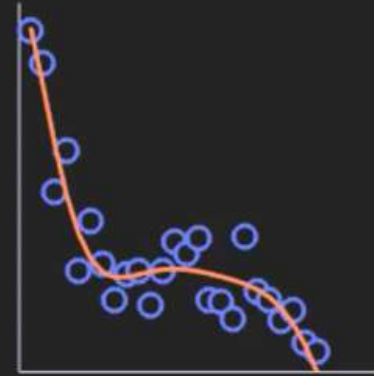
Order = 2



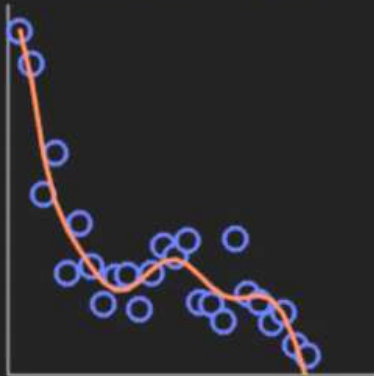
Order = 5



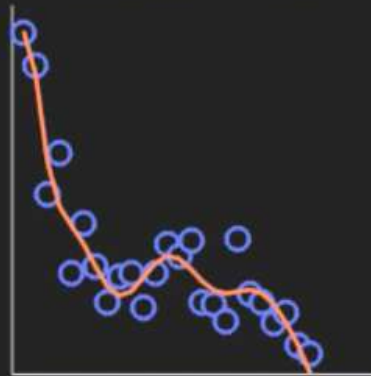
Order = 8



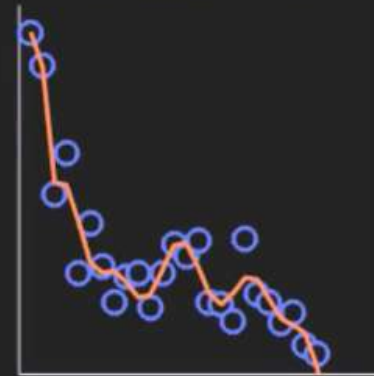
Order = 11



Order = 14



Order = 17



Model order selection, thanks to Bayes

$$\text{BIC}_k = n \log(\text{SS}_\epsilon) + k \log(n)$$

