1 Logistic Function

- A logistic function (or logistic curve) is a common sigmoid function, given its name (in reference to its S-shape) in 1844 or 1845 by Pierre François Verhulst who studied it in relation to population growth.
- A generalized logistic curve can model the "S-shaped" behaviour (abbreviated S-curve) of growth of some population P.
- The initial stage of growth is approximately exponential; then, as saturation begins, the growth slows, and at maturity, growth stops. The logistic function is the sigmoid curve with equation:

$$f(x) = \frac{1}{1 + \mathrm{e}^{-x}}$$