

MATLAB: Probability Density Function

The standard normal probability density function (PDF), aka the Bell Curve, can be represented as:

$$P(z) = \frac{1}{\sqrt{2\pi}} e^{-z^2/2}$$

- a) Use colon notation to create the `z` vector from -6 to 6 in steps of 3.
- b) Compute the `P` vector. The `exp()` function will be useful here.
- c) Plot the PDF (`P` vs. `z`). Use the `uicolor()` command to pick your favorite color. Tinker with the line width as well.
- d) You should notice the plot bears little resemblance to the Bell Curve. This is mainly because the step size is too large, making the plot look jagged. Experiment with various step sizes. Choose a step size which makes the plot appear smoother and more continuous. What step size did you use?