1. Resolution is the number of bits that can represent a value, for example an 8-bit resolution has values 0-255 and 10 bit has 0-1023. The reference voltage is the operating voltage of the board. Quantization error is the rounding error between the analog input voltage and the actual digital value output. Step size is the incremental change of the x variable.
2. The default resolution for an adc in Arduino is 10-bit. With a 5V reference voltage this produces a step size of ~5mv

5V/1024 = 5mv

Resolution = (Ref. Voltage/Step Size)

1. 1.33V/(5V/1024) = 272

2.71V/(5V/1024) = 555

2.75V/(5V/1024) = 563

3.99V/(5V/1024) = 817

1. 125\*(5V/1024) = 0.61V  
   400\*(5V/1024) = 1.95V

938\*(5V/1024) = 4.58V

20\*(5V/1024) = 0.97V

1. Raw = (Angle/270)\*1023

Chart, line chart

Description automatically generated

1. Demo