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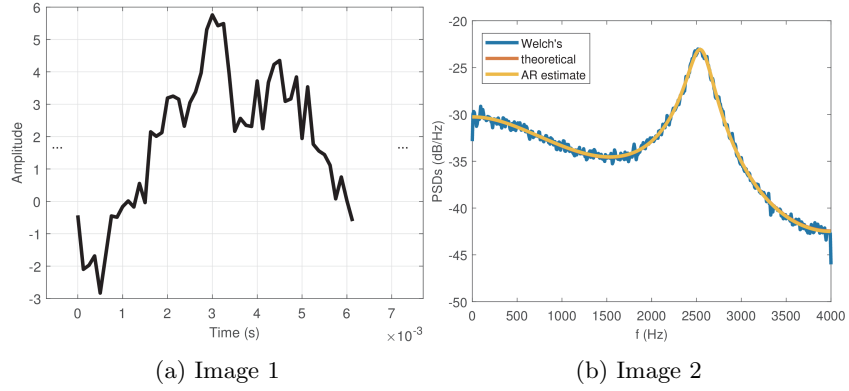

(a) Image 1   (b) Image 2

Figure 1: Main Caption

$$x(t) = \begin{cases} A, & -T/2 \leq t \leq T/2 \\ 0, & \text{otherwise} \end{cases} \Leftrightarrow X(f) = AT sinc(fT) \qquad (1)$$

$$x(t) \rightarrow \boxed{\text{SAMPLING}} \rightarrow x_s(t) \rightarrow \boxed{\text{S/D}} \rightarrow x[n] \rightarrow \boxed{\tilde{Q}_c} \rightarrow x_b[n],$$

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$$\boxed{\sin(x)}$$

$$\begin{bmatrix} x(0) \\ x(1) \\ x(2) \\ x(3) \end{bmatrix} = \frac{1}{2} \begin{bmatrix} 1 & 1.307 & 1 & 0.541 \\ 1 & 0.541 & -1 & -1.307 \\ 1 & -0.541 & -1 & 1.307 \\ 1 & -1.307 & 1 & -0.541 \end{bmatrix} \begin{bmatrix} 5 \\ -2.230 \\ 0 \\ -0.158 \end{bmatrix}$$

$$= \frac{1}{2} \left\{ 5 \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \end{bmatrix} - 2.230 \begin{bmatrix} 1.307 \\ 0.541 \\ -0.541 \\ -1.307 \end{bmatrix} \right.$$

$$\left. +0 \begin{bmatrix} 1 \\ -1 \\ -1 \\ 1 \end{bmatrix} - 0.158 \begin{bmatrix} 0.541 \\ -1.307 \\ 1.307 \\ -0.541 \end{bmatrix} \right\}.$$

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