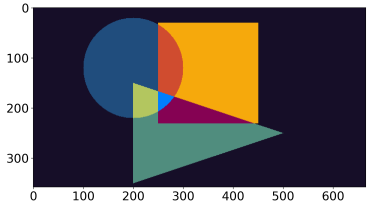
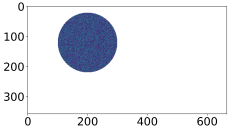


Set I of pixels with 3 shapes
$\mathcal{F} = \{\text{circle}, \text{triangle}, \text{square}\}$

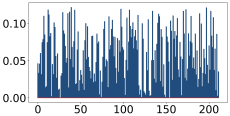
Spatial domain description



$\{\alpha_{\text{circle},i}\}_{i \in I}$ $\{\alpha_{\text{triangle},i}\}_{i \in I}$ $\{\alpha_{\text{square},i}\}_{i \in I}$

$\otimes$ $\otimes$ $\otimes$

Spectral domain description



$\mathbf{s}_{\text{circle}}$ $\mathbf{s}_{\text{triangle}}$ $\mathbf{s}_{\text{square}}$

$\oplus$ $\varepsilon_i \sim \mathcal{N}(0, \sigma^2 I)$

$$x^{(i)} = \frac{1}{C_i} \sum_{f \in F} \alpha_{f,i}\, \mathbf{s}_f + \varepsilon_i$$