Compressive Sensing in Video Reconstruction: Demonstration

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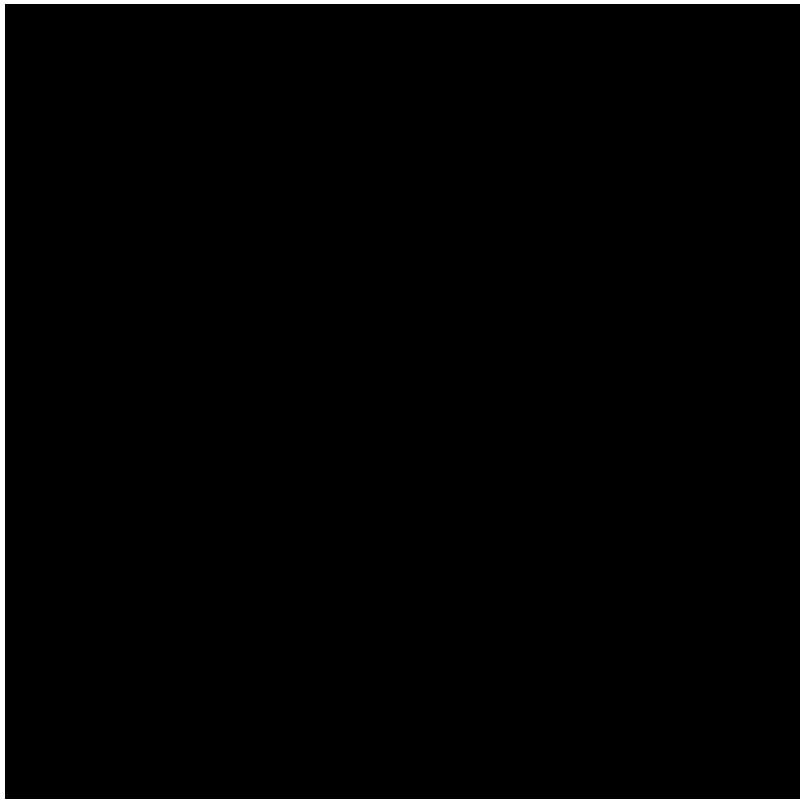
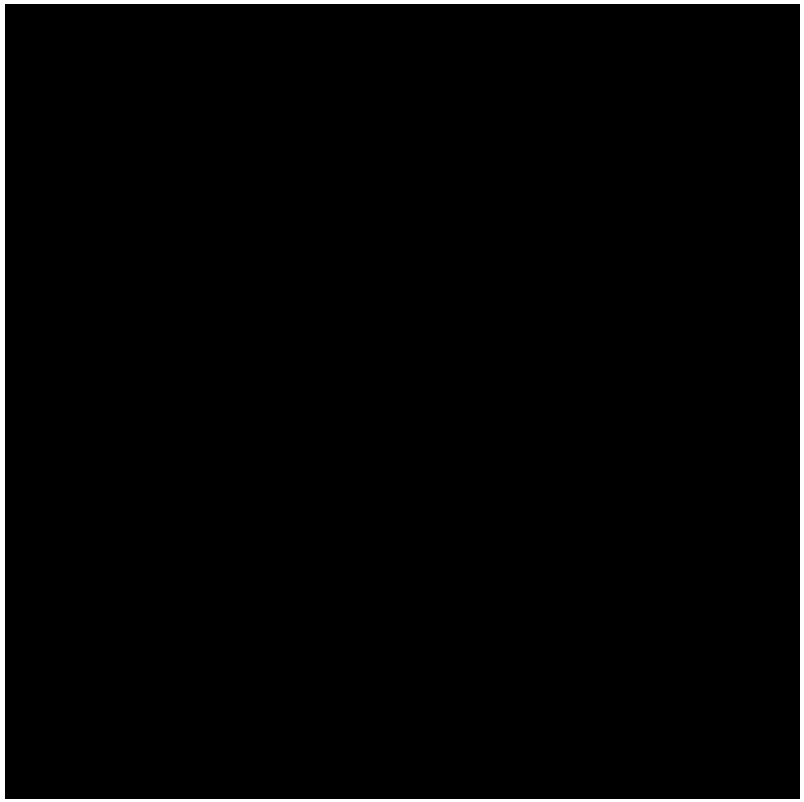
Uniform Mask — $N = 0.3\,M$ — DCT basis



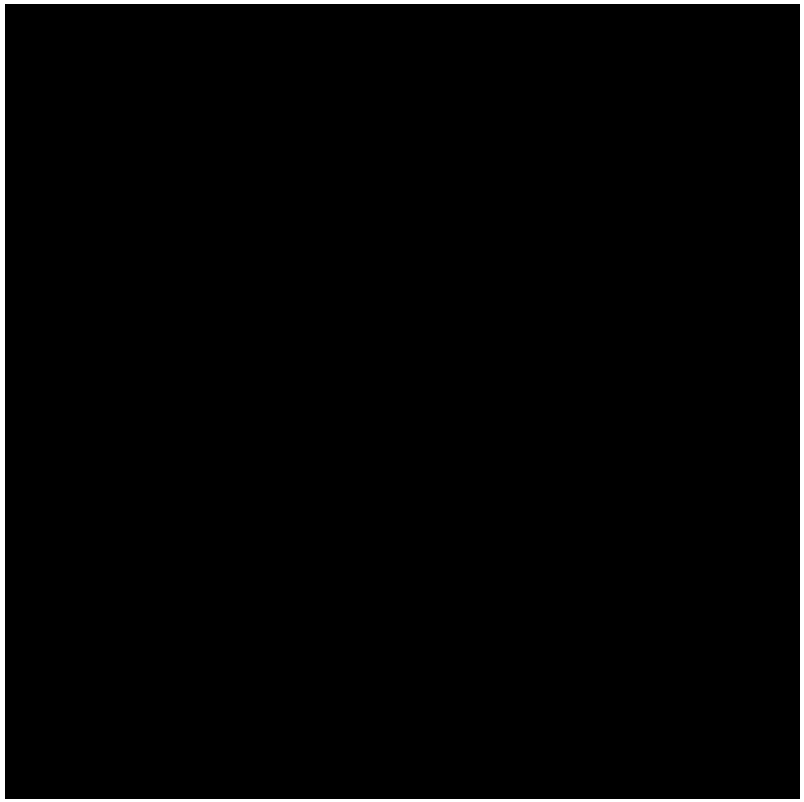
$\boldsymbol{y}$



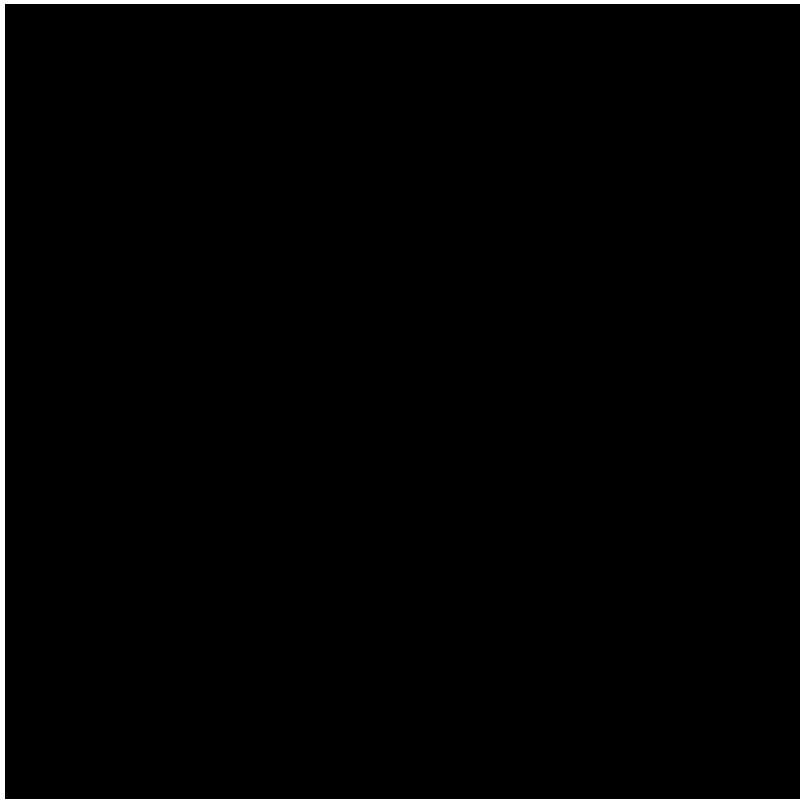
$\hat{\boldsymbol{v}}$

PSNR = 26.47 dB. Relative Error = 6.88%.

Uniform Mask — $N = 0.3\,M$ — DCT basis



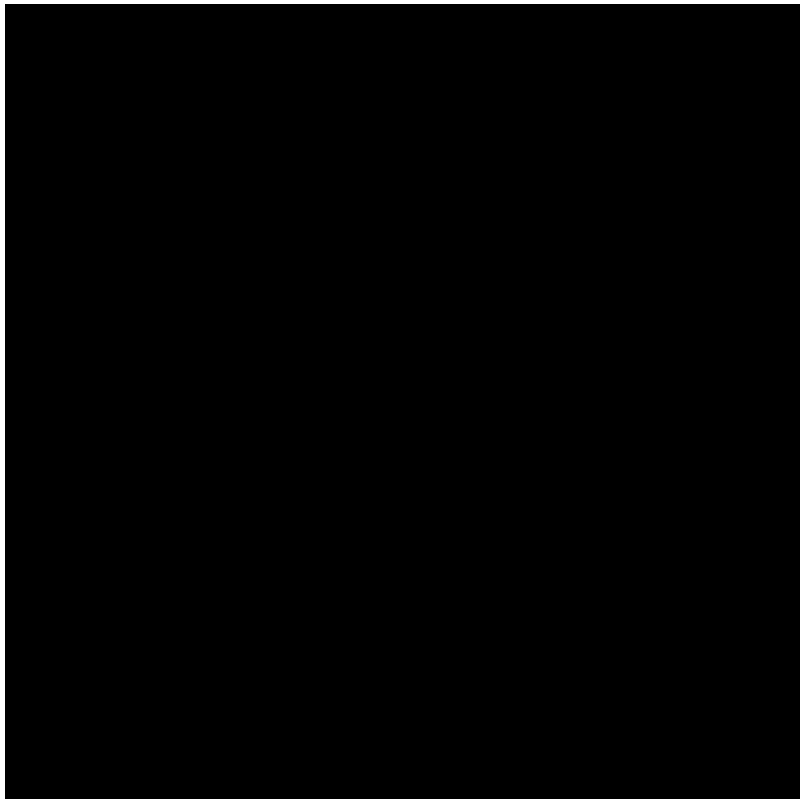
$\boldsymbol{y}$



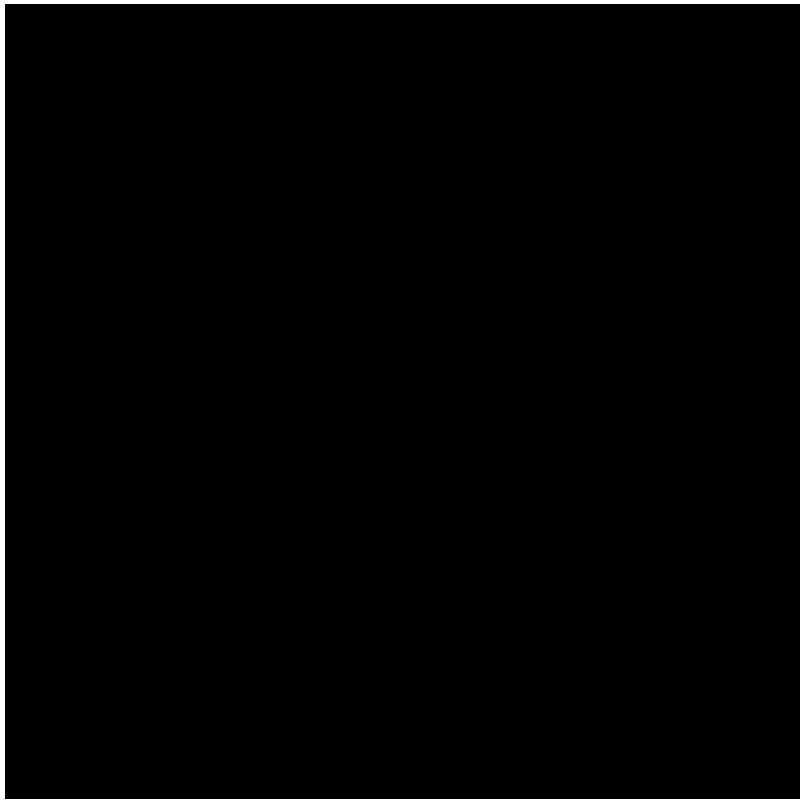
$\hat{\boldsymbol{v}}$

PSNR = 25.26 dB. Relative Error = 9.53%.

Horizontal Lines Mask — $N = 0.3\,M$ — DCT basis



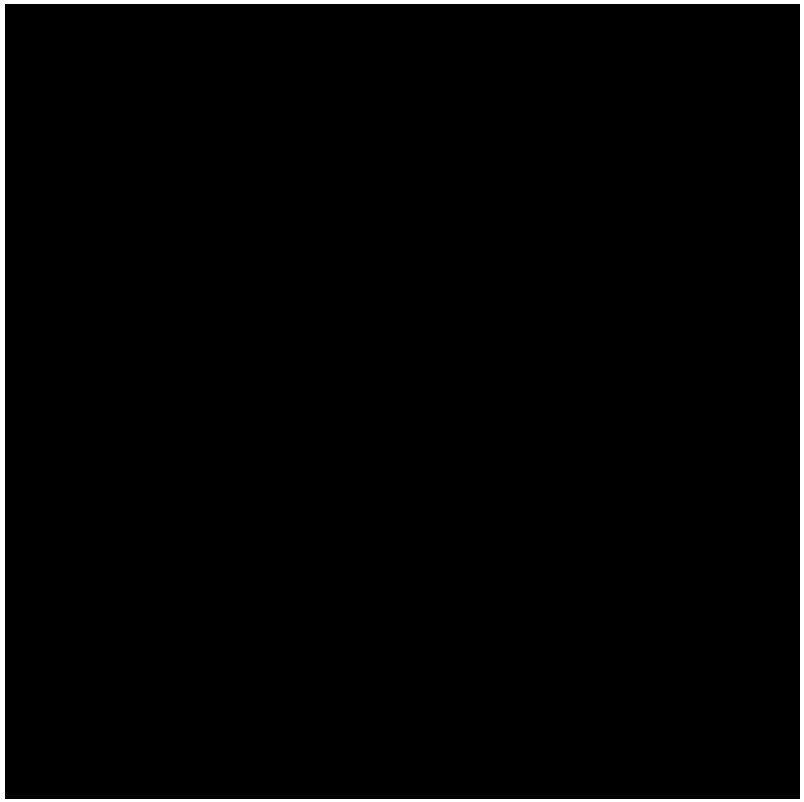
$\boldsymbol{y}$



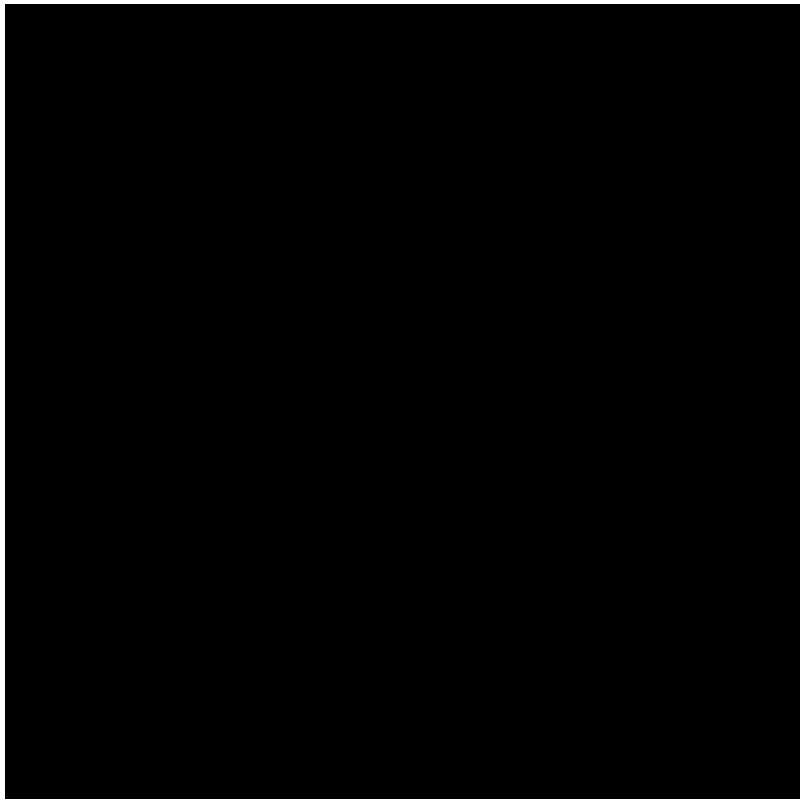
$\hat{\boldsymbol{v}}$

PSNR = 21.15 dB. Relative Error = 15.29%.

Gaussian Sensor — $N = 0.3\,M$ — DCT basis



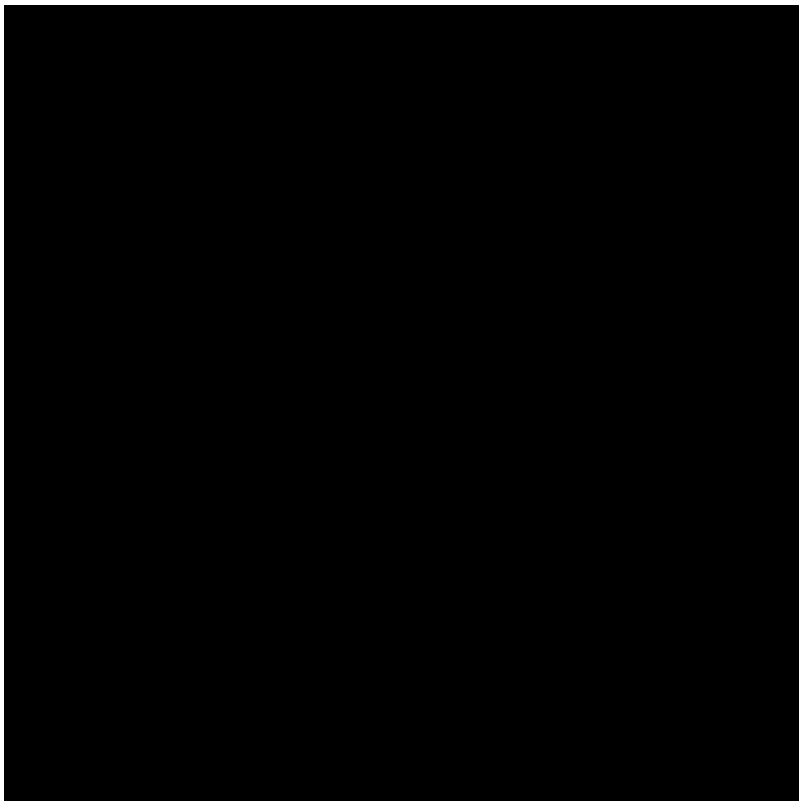
$\boldsymbol{y}$



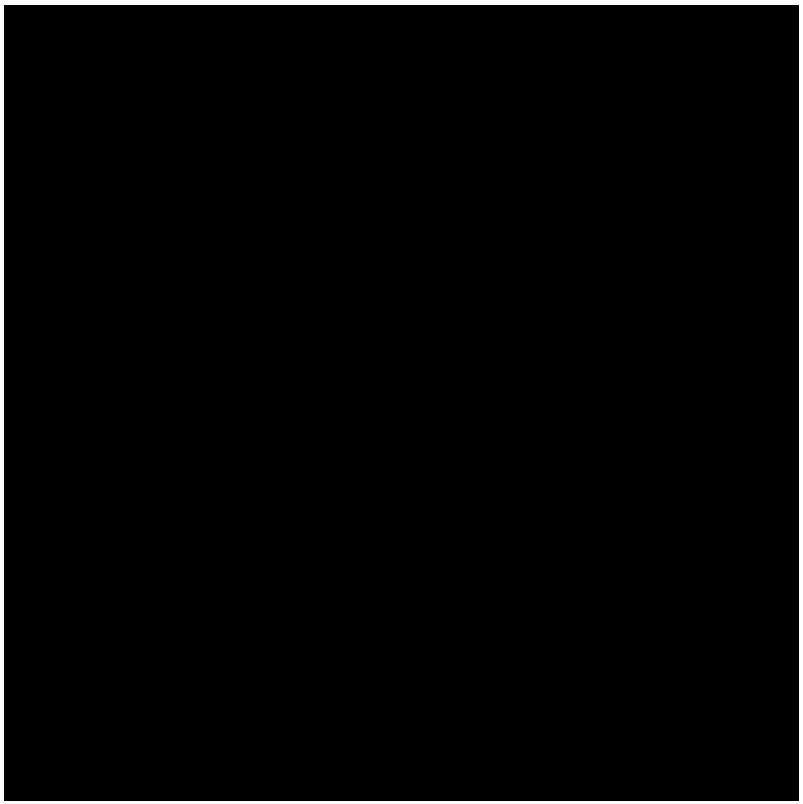
$\hat{\boldsymbol{v}}$

PSNR = 25.12 dB. Relative Error = 9.69%.

Missing Frames — $N = 0.3\,M$ — DCT basis

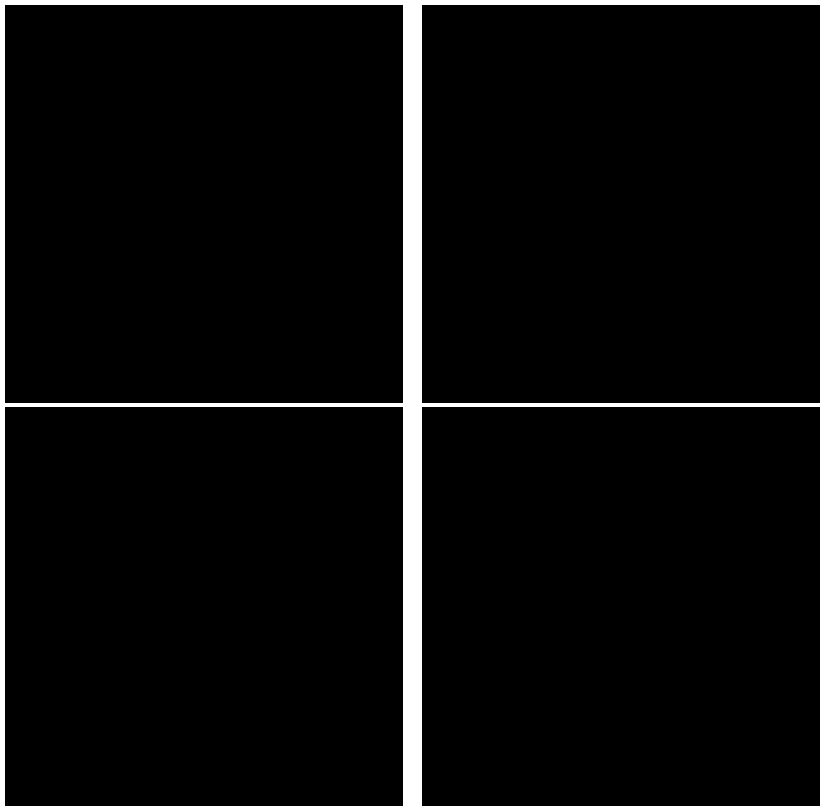


$\boldsymbol{y}$

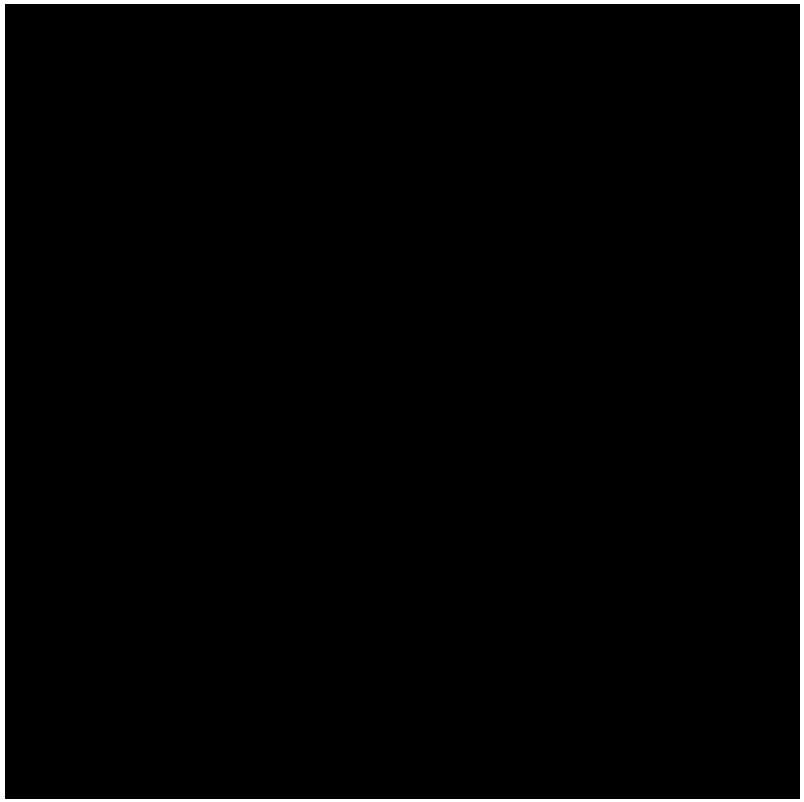


$\hat{\boldsymbol{v}}$

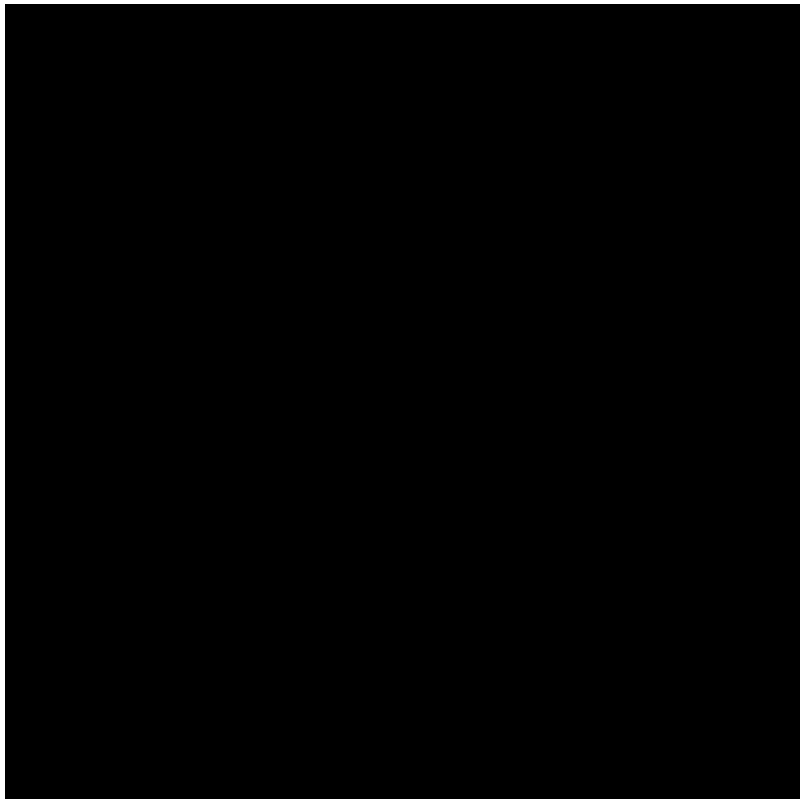
Uniform Mask — $N = 0.3\,M$ — Haar Cascade



Originals



Foreman



Soccer