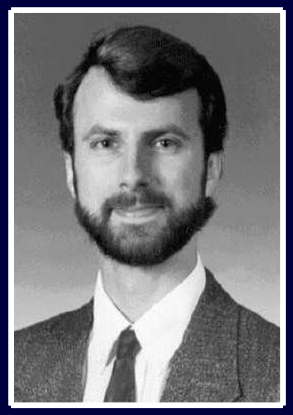
Interpolation: Image magnification

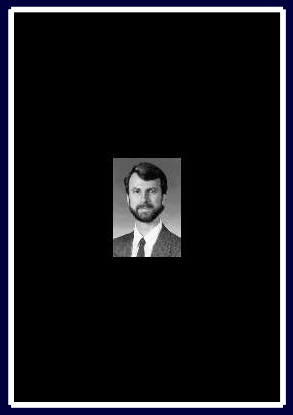
Original



Nearest neighbor

Linear

Downsampled



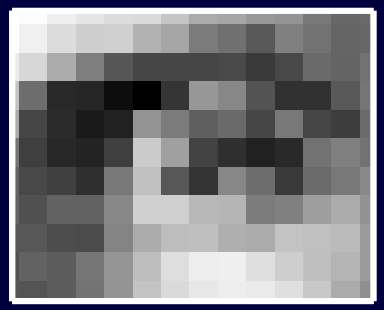
Cubic

Cubic b–spline

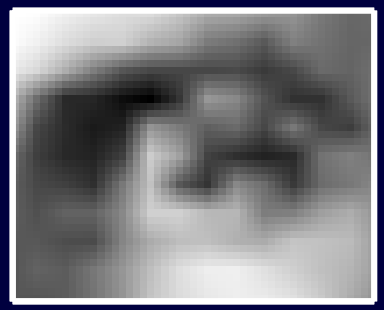
Interpolation: Image magnification

Original

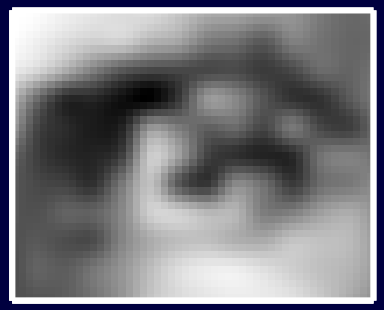
Nearest neighbor



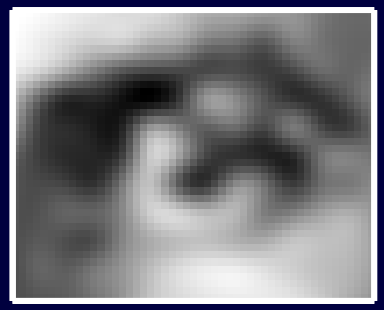
Linear



Cubic



Cubic b–spline



Interpolation: Image rotation

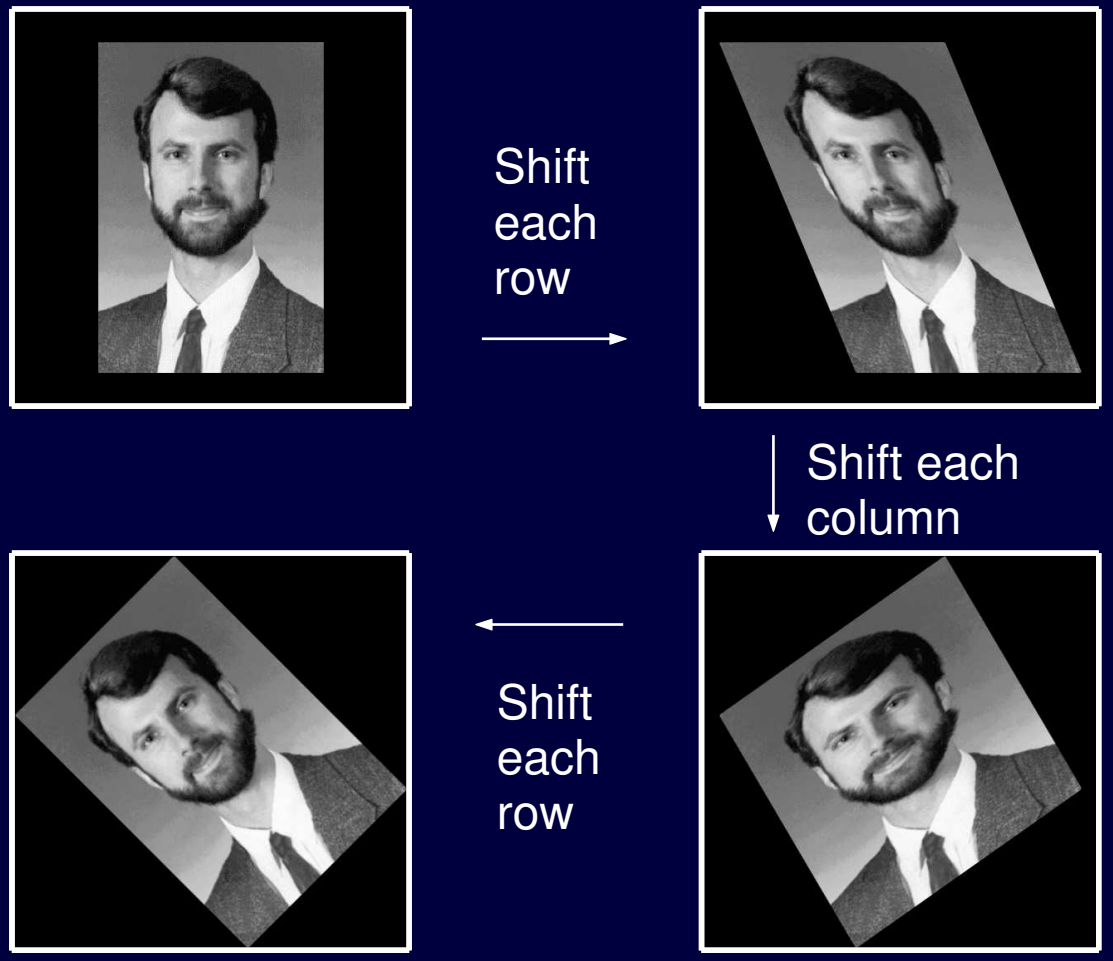
Shift each row

Interpolation: Image rotation

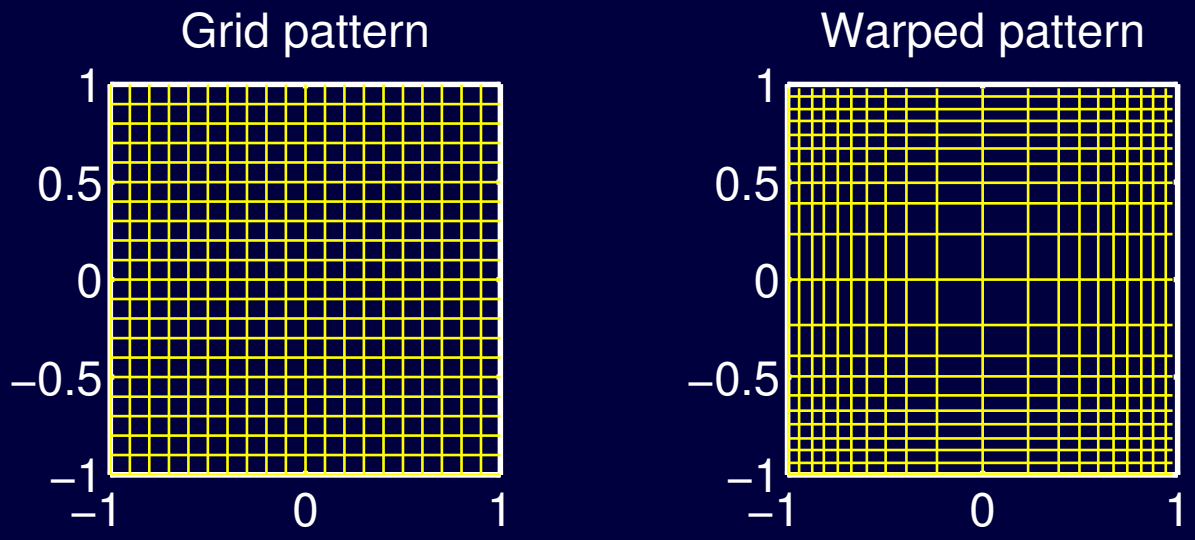
Shift each row

Shift each column

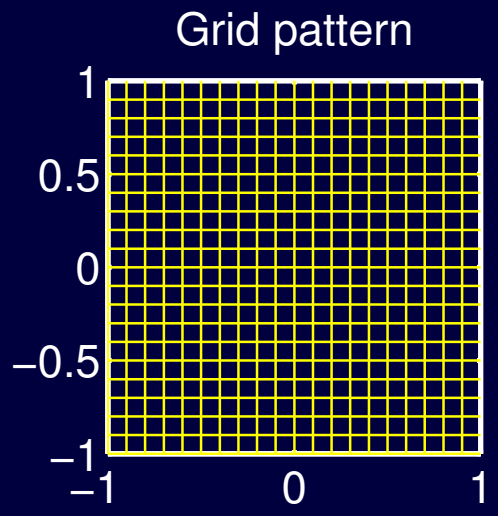
Interpolation: Image rotation

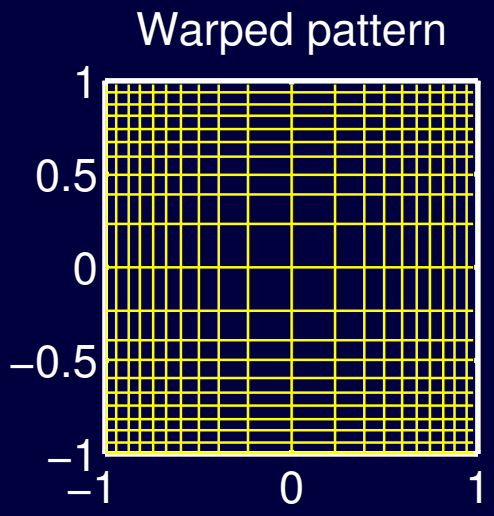


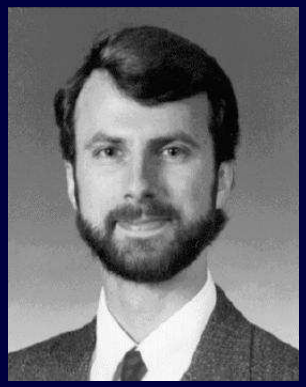
Interpolation: Image warping



Interpolation: Image warping





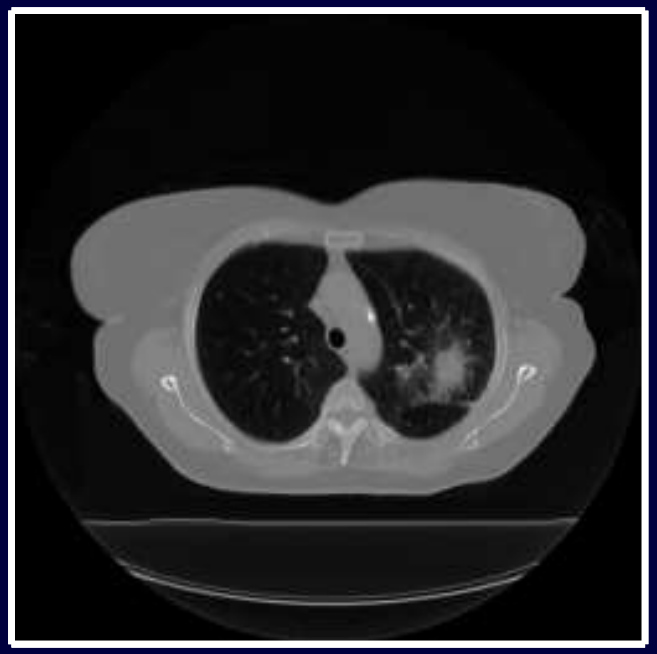


f(x,y)

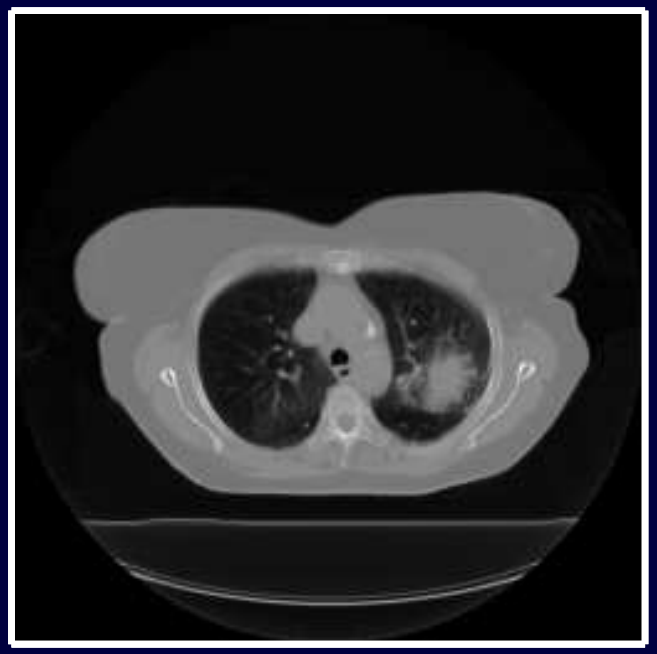
$g(x,y) = f(T_x(x,y), T_y(x,y))$

Interpolation: Image registration

f(x,y)



g(x,y)



Find $T_x(\cdot)$, $T_y(\cdot)$

s.t. $g(x,y) \sim f(T_x(x,y), T_y(x,y))$