Subject: Applying matrices from polywarp to coordinates
Posted by lefsky@gmail.com on Fri, 12 Feb 2016 15:00:24 GMT
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I have a series of ground control points that I need to transform with first and second degree polynomials so I can relate them (the input) to a manually digitized reference (the target)

I am using polywarp to create the transformation matrices, and that part of the task returns a zero status using either first or second order polynomial degree

```
 polywarp,target_x,target_y,input_x,input_y,degree,kx,ky,stat us=status
print,'status:',status
```

I use the following code to apply the transform matrices to the input data.

```
est_x=fltarr(n_elements(in))
est_y=fltarr(n_elements(in))

  for i=0.0,degree do begin
    for j=0.0,degree do begin
      est_x=est_x+(kx[i,j]*(input_x^j)*(input_y^i))
      est_y=est_y+(ky[i,j]*(input_x^j)*(input_y^i))
    endfor
  endfor
```

This works fine for first order equations (2 x 2 output matrices) and fails for the second degree equations (3 x 3 matrices)

I've look these over but can't find the error in the code. Does anyone else see it? Or is there a better way to do this?

M