Notes

Python only: AE system uses python 3.7.

Matlab only: AE system runs Matlab without Java VM (`-nojvm`) and without graphical display (`-nodisplay`). When the system runs your code, use of drawing functions has no effect usually, use of functions that require Java VM (e.g. `imshow`) would result in a runtime error.

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2022-11-13 15:09:04

Data ID: 23

Platform: python

e2p_2d

```
Runtime error: all the input array dimensions for the concatenation axis must match exactly, but along dimension 1, the array at index 0 has size 100 and the array at index 1 has size 2, traceback: Traceback (most recent call last):
File "/local/script/ae/aetools.py", line 439, in tryrun
result = fce( *args )
File "/local/data/tools.py", line 5, in e2p
return np.vstack((u_real, np.ones((1,u_real.shape[0]))))
File "<__array_function__ internals>", line 5, in vstack
File "/usr/lib/python3/dist-packages/numpy/core/shape_base.py", line 283, in vstack
return _nx.concatenate(arrs, 0)
File "<__array_function__ internals>", line 5, in concatenate
ValueError: all the input array dimensions for the concatenation axis must match exactly, but along dimension 1, the array at index 0 has size 100 and the array at index 1 has size 2
```

e2p_3d

Runtime error: all the input array dimensions for the concatenation axis must match exactly, but along dimension 1, the array at index 0 has size 100 and the array at index 1 has size 3, traceback: Traceback (most recent call last):
File "/local/script/ae/aetools.py", line 439, in tryrun
result = fce(*args)
File "/local/data/tools.py", line 5, in e2p
return np.vstack((u_real, np.ones((1,u_real.shape[0]))))
File "<__array_function__ internals>", line 5, in vstack
File "/usr/lib/python3/dist-packages/numpy/core/shape_base.py", line 283, in vstack
return _nx.concatenate(arrs, 0)
File "<__array_function__ internals>", line 5, in concatenate
ValueError: all the input array dimensions for the concatenation axis must match exactly, but along dimension 1, the array at index 0 has size 100 and the array at index 1 has size 3

p2e_2d

PASS

p2e_3d

PASS

vlen

PASS

sqc

PASS

EutoRt

Runtime error: all the input arrays must have same number of dimensions, but the array at index 0 has 2 dimension(s) and the array at index 1 has 1 dimension(s), traceback: Traceback (most recent call last):
File "/local/script/ae/aetools.py", line 439, in tryrun
result = fce(*args)
File "/local/data/tools.py", line 35, in EutoRt
P1 = np.hstack((R1,t1))
File "<__array_function__ internals>", line 5, in hstack
File "/usr/lib/python3/dist-packages/numpy/core/shape_base.py", line 346, in hstack
return _nx.concatenate(arrs, 1)
File "<__array_function__ internals>", line 5, in concatenate
ValueError: all the input arrays must have same number of dimensions, but the array at index 0 has 2 dimension(s) and the array at index 1 has 1 dimension(s)

err_F_sampson

FAIL

```
Input:
F
[[ 3.23654004e-08 -5.27201236e-08  3.38727795e-04]
 [ 3.98657729e-09 -1.28532179e-07 -4.20200719e-04]
 [-1.79430980e-04  6.99070565e-04 -3.38133620e-01]]
u1
[[484.16247146 577.03647725 933.30334239 667.59926748 897.26239822
  499.08171327 729.83805857 830.69117897 794.01793666 541.06940788]
 [456.60443445 710.12571997 690.06118771 706.21151207 741.05382959
  597.67953006 414.66175677 374.8557634  717.19459585 484.97456964]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
u2
[[421.95571364 397.78558276 721.39385603 536.11201032 720.38298197
  412.7217649  735.03045087 795.45340002 626.25151609 438.44778467]
 [128.04960726 368.50027703 433.35326883 469.70381338 565.54115567
  332.61356512 217.82076455 192.47996817 461.2348991  170.01468777]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
Your output:
err
[-34375.27224702  -7114.25993507  -2926.05027379 -39110.07764152
 -45647.86971626 -52674.52497884 -41312.64906471 -52084.48379946
 -12598.13296708 -41351.26197644]
Ref  output:
err
[ 945.32853614   39.81788308    6.4731679  1164.13392366 1541.84840476
 2162.62191506 1299.11977771 2059.57923542  120.44765376 1359.45894484]
```

u_correct_sampson

FAIL

```
Input:
F
[[ 3.23654004e-08 -5.27201236e-08  3.38727795e-04]
 [ 3.98657729e-09 -1.28532179e-07 -4.20200719e-04]
 [-1.79430980e-04  6.99070565e-04 -3.38133620e-01]]
u1
[[484.16247146 577.03647725 933.30334239 667.59926748 897.26239822
  499.08171327 729.83805857 830.69117897 794.01793666 541.06940788]
 [456.60443445 710.12571997 690.06118771 706.21151207 741.05382959
  597.67953006 414.66175677 374.8557634  717.19459585 484.97456964]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
u2
[[421.95571364 397.78558276 721.39385603 536.11201032 720.38298197
  412.7217649  735.03045087 795.45340002 626.25151609 438.44778467]
 [128.04960726 368.50027703 433.35326883 469.70381338 565.54115567
  332.61356512 217.82076455 192.47996817 461.2348991  170.01468777]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
Your output:
nu1
[[489.84345733 578.21095217 933.75499341 673.86497527 904.28582157
  507.75968771 736.23214392 838.65585884 795.99991714 547.87428175]
 [433.9041558  705.63850641 688.28993609 682.33736673 714.19454782
  564.25436895 388.53883134 341.91783306 709.55041435 457.92657747]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
nu2
[[410.60067897 395.50926221 720.42078508 523.47541303 705.37854534
  395.68834919 720.96397817 777.43992892 622.13676535 424.77408827]
```

```
 [144.44520035 372.12267553 434.83143657 489.58386426 588.9070666
  358.68914811 237.26202383 216.70290593 467.65009378 189.8789467 ]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
Ref  output:
nu1
[[478.4814856  575.86200232 932.85169136 661.33355968 890.23897487
  490.40373883 723.44397323 822.7264991  792.03595617 534.26453401]
 [479.3047131  714.61293354 691.83243933 730.0856574  767.91311135
  631.10469118 440.78468221 407.79369374 724.83877735 512.02256182]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
nu2
[[433.31074831 400.06190332 722.36692698 548.7486076  735.3874186
  429.75518062 749.09692357 813.46687112 630.36626682 452.12148106]
 [111.65401418 364.87787854 431.87510109 449.82376249 542.17524473
  306.53798213 198.37950526 168.25703041 454.81970443 150.15042884]
 [  1.           1.           1.           1.           1.
    1.           1.           1.           1.           1.        ]]
```

Pu2X

Runtime error: SVD did not converge, traceback: Traceback (most recent call last):
File "/local/script/ae/aetools.py", line 439, in tryrun
result = fce(*args)
File "/local/data/tools.py", line 86, in Pu2X
U,_,_ = np.linalg.svd(D_stable)
File "<__array_function__ internals>", line 5, in svd
File "/usr/lib/python3/dist-packages/numpy/linalg/linalg.py", line 1661, in svd
u, s, vh = gufunc(a, signature=signature, extobj=extobj)
File "/usr/lib/python3/dist-packages/numpy/linalg/linalg.py", line 97, in
_raise_linalgerror_svd_nonconvergence
raise LinAlgError("SVD did not converge")
numpy.linalg.LinAlgError: SVD did not converge

(finish)