Results for Cell Type #1

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 0.1268, beta 1 = 10, alpha 1 = 1.6986, alpha 2 = 2.6219, beta 2 = -0.71244

R values at each time stamp

0.7710

0.7870

0.6358

Square error 37.2388

Results for Cell Type #2

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 2.4464, beta 1 = 6.1261, alpha 1 = 0.98933, alpha 2 = 1.0964, beta 2 = -1.3527

R values at each time stamp

0.7285

0.7373

0.5736

Square error 41.7869

Results for Cell Type #3

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

```
eNDM minimizing quadratic error at all time stamps with fmincon
\times 0 value = 0.42558, beta1 = 5.8617, alpha1 = 3.1261, alpha2 = -4.102, beta2 = 5
R values at each time stamp
  0.7371
  0.7482
  0.5807
Square error
  41.1567
Results for Cell Type #4
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
\times 0 value = 0.54941, beta1 = 10, alpha1 = 1.1607, alpha2 = 2.3051, beta2 = -0.47009
R values at each time stamp
  0.7733
  0.7680
  0.5934
Square error
  39.8873
Results for Cell Type #5
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
\times 0 value = 0.034403, beta1 = 10, alpha1 = 3.0527, alpha2 = 3.9879, beta2 = -0.58399
R values at each time stamp
  0.7268
  0.7306
```

0.5978

Square error 40.6809

Results for Cell Type #6

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 1.6474, beta = 4.8121, alpha = 1.9869, alpha = -3.1562, beta = 5

R values at each time stamp

0.7864

0.7710

0.6046

Square error 39.1769

Results for Cell Type #7

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 2.0328, beta 1 = 4.9696, alpha 1 = 1.3459, alpha 2 = -2.7851, beta 2 = 5

R values at each time stamp

0.7375

0.7385

0.5778

Square error 41.3778

Results for Cell Type #8

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

 $\times 0$ value = 0.68734, beta1 = 9.9999, alpha1 = 1.3405, alpha2 = 2.5914, beta2 = -1.4404

R values at each time stamp

0.7519

0.7449

0.5790

Square error 41.2155

Results for Cell Type #9

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 0.19087, beta 1 = 2.7183, alpha 1 = 2.0376, alpha 2 = 3.3914, beta 2 = 5

R values at each time stamp

0.7552

0.8208

0.7583

Square error 29.1239

Results for Cell Type #10

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

```
\times 0 value = 1.5583, beta1 = 4.756, alpha1 = 1.2902, alpha2 = 1.816, beta2 = 4.6655
R values at each time stamp
  0.7458
  0.7492
  0.5897
Square error
 40.4739
Results for Cell Type #11
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
x0 \text{ value} = 0.53814, \text{ beta} 1 = 7.309, \text{ alpha} 1 = 2.3528, \text{ alpha} 2 = 3.7071, \text{ beta} 2 = -1.0055
R values at each time stamp
  0.7104
  0.7369
  0.6416
Square error
 37.8558
Results for Cell Type #12
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
\times 0 value = 1.7046, beta1 = 4.5361, alpha1 = 1.0304, alpha2 = 1.2065, beta2 = 5
R values at each time stamp
  0.7448
  0.7566
  0.6115
```

```
Square error 39.1017
```

Results for Cell Type #13

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

```
<stopping criteria details>
```

eNDM minimizing quadratic error at all time stamps with fmincon

```
x0 \text{ value} = 0.86555, \text{ beta} 1 = 10, \text{ alpha} 1 = 1.0204, \text{ alpha} 2 = 1.5598, \text{ beta} 2 = -0.34832
```

R values at each time stamp

0.7460

0.7412

0.5800

Square error 41.2645

Results for Cell Type #14

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

```
<stopping criteria details>
```

eNDM minimizing quadratic error at all time stamps with fmincon

```
x0 \text{ value} = 0.18413, \text{ beta} 1 = 4.5985, \text{ alpha} 1 = 2.6798, \text{ alpha} 2 = 3.8081, \text{ beta} 2 = 5
```

R values at each time stamp

0.7736

0.7822

0.6278

Square error 37.7423

Results for Cell Type #15

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance,

and constraints are satisfied to within the default value of the constraint tolerance. <stopping criteria details> eNDM minimizing quadratic error at all time stamps with fmincon $\times 0$ value = 1.2301, beta1 = 4.5867, alpha1 = 1.4115, alpha2 = 2.5493, beta2 = 5 R values at each time stamp 0.7213 0.7372 0.5939 Square error 40.5231 Results for Cell Type #16 Local minimum found that satisfies the constraints. Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance. <stopping criteria details> eNDM minimizing quadratic error at all time stamps with fmincon $\times 0$ value = 2.691, beta1 = 2.9242, alpha1 = 1.0282, alpha2 = 0.069936, beta2 = 5 R values at each time stamp 0.7367 0.7499 0.6007 Square error 40.0709 Results for Cell Type #17 Local minimum possible. Constraints satisfied. fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance. <stopping criteria details> eNDM minimizing quadratic error at all time stamps with fmincon $\times 0$ value = 0.7997, beta1 = 9.2979, alpha1 = 1.2974, alpha2 = 2.3422, beta2 = -1.0127

```
R values at each time stamp
  0.7669
  0.7588
  0.5860
Square error
 40.4501
Results for Cell Type #18
Local minimum found that satisfies the constraints.
Optimization completed because the objective function is non-decreasing in
feasible directions, to within the default value of the optimality tolerance,
and constraints are satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
x0 \text{ value} = 3.1657, \text{ beta} = 8.216, \text{ alpha} = 1.4633, \text{ alpha} = -2.216, \text{ beta} = -1.5927
R values at each time stamp
  0.7375
  0.7541
  0.6280
Square error
 38.3698
Results for Cell Type #19
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
x0 \text{ value} = 2.2044, beta 1 = 6.226, alpha 1 = 1.2086, alpha 2 = -1.0362, beta 2 = -1.058
R values at each time stamp
  0.7426
  0.7444
  0.5797
```

Square error 41.4903 Results for Cell Type #20

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

 $\times 0$ value = 0.68796, beta1 = 6.3646, alpha1 = 2.4863, alpha2 = -3.7129, beta2 = -4.4936

R values at each time stamp

0.7328

0.7324

0.5853

Square error 41.4798

Results for Cell Type #21

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than the default value of the step size tolerance and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 0.56753, beta1 = 3.7691, alpha1 = 1.7958, alpha2 = 3.1162, beta2 = 5

R values at each time stamp

0.7612

0.7730

0.6432

Square error 37.0363

Results for Cell Type #22

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

```
eNDM minimizing quadratic error at all time stamps with fmincon
x0 \text{ value} = 0.1594, \text{ beta} 1 = 9.9995, \text{ alpha} 1 = 1.9595, \text{ alpha} 2 = 3.3588, \text{ beta} 2 = -1.6191
R values at each time stamp
  0.7594
  0.7567
  0.5862
Square error
  40.7762
Results for Cell Type #23
Local minimum possible. Constraints satisfied.
fmincon stopped because the size of the current step is less than
the default value of the step size tolerance and constraints are
satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
x0 \text{ value} = 0.041585, beta1 = 9.9954, alpha1 = 2.4791, alpha2 = 3.4872, beta2 = -1.1239
R values at each time stamp
  0.7607
  0.7672
  0.6002
Square error
  39.5167
Results for Cell Type #24
Local minimum found that satisfies the constraints.
Optimization completed because the objective function is non-decreasing in
feasible directions, to within the default value of the optimality tolerance,
and constraints are satisfied to within the default value of the constraint tolerance.
<stopping criteria details>
eNDM minimizing quadratic error at all time stamps with fmincon
\times 0 value = 4.7903, beta1 = 9.9384, alpha1 = 3.9156, alpha2 = -3.8301, beta2 = -2.0373
R values at each time stamp
  0.6683
  0.7520
```

0.6864

Square error 35.3069

Results for Cell Type #25

Local minimum found that satisfies the constraints.

Optimization completed because the objective function is non-decreasing in feasible directions, to within the default value of the optimality tolerance, and constraints are satisfied to within the default value of the constraint tolerance.

<stopping criteria details>

eNDM minimizing quadratic error at all time stamps with fmincon

x0 value = 0.90067, beta 1 = 7.7168, alpha 1 = 1.7434, alpha 2 = 3.2106, beta 2 = -5

R values at each time stamp

0.7369

0.7435

0.5791

Square error 41.4218

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