Contents

Part B

```
clear; close all;
ranking;

T = diag(2+t);
r = (T-M)\(1+w-0.5*t);

disp('The rankings of the  teams are as follows: ');
r
```

```
2013 Pac-12 Football Regular Season Results loading...
The rankings of the  teams are as follows:

r =

    0.4424
    0.6065
    0.1907
    0.7389
    0.5478
    0.3198
    0.6312
    0.8093
    0.4522
    0.1142
    0.6737
    0.4732
```

Part C

Using lagrange multipliers as a way to implement a constraint

```
Ahat = [ 2*A'*A ones(12,1); ones(1,12) 0];
yhat = [2*A'*s; 0];

rlambda = Ahat\yhat;
rtilde = rlambda(1:12,1);

disp('The rankings of the teams are as follows: ');
rtilde
```

```
The rankings of the teams are as follows:
```

```
rtilde =

   -2.4510
    2.9068
  -22.3601
   15.8811
    8.4308
   -4.2144
    5.1652
   17.0785
    0.6286
  -26.2864
   12.5015
   -7.2805
```

Part F

```
for i = 1:12
   perc(i,1) = w(i)/t(i);
end

[sortP, indxP] = sort(perc,'descend');
[sortR, indxR] = sort(r, 'descend');
[sortRT, indxRT] = sort(rtilde, 'descend');

indxPself = [8, 11, 4, 7, 2, 5, 1, 9, 12, 6, 3, 10]';

disp('RANKINGS');

disp('Rankings #1: Percentage');
for i = 1:12
   disp(teams{indxPself(i)});
end

disp(' ');
disp('Rankings #2: R');
for i = 1:12
   disp(teams{indxR(i)});
end

disp(' ');
disp('Rankings #3: Rtilde');
for i = 1:12
   disp(teams{indxRT(i)});
end
```

```
RANKINGS
Rankings #1: Percentage
Arizona State
Oregon
Stanford
UCLA
```

```
USC
Washington
Arizona
Oregon State
Washington State
Utah
Colorado
California

Rankings #2: R
Arizona State
Stanford
Oregon
UCLA
USC
Washington
Washington State
Oregon State
Arizona
Utah
Colorado
California

Rankings #3: Rtilde
Arizona State
Stanford
Oregon
Washington
UCLA
USC
Oregon State
Arizona
Utah
Washington State
Colorado
California
```

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