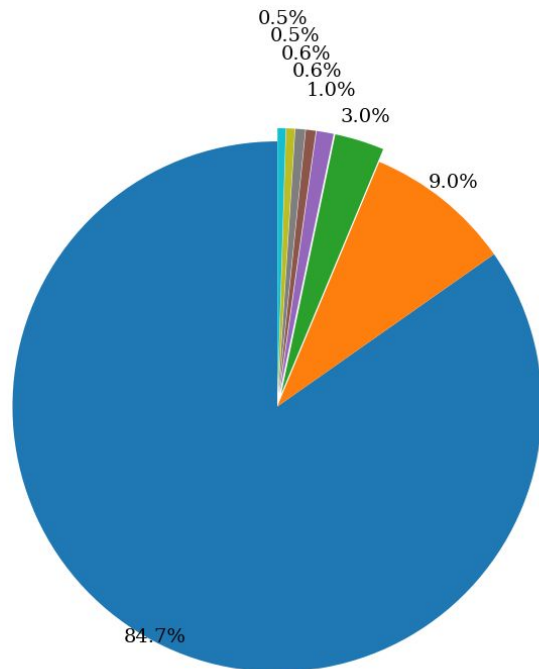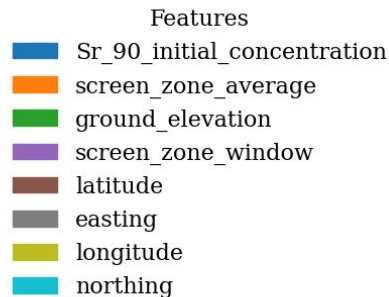# Random Forest plots

Until 08/19
Student: Vu Anh Le
PI: Haruko Murakami Wainwright

Feature Importances for Sr-90 with the analyte concentration
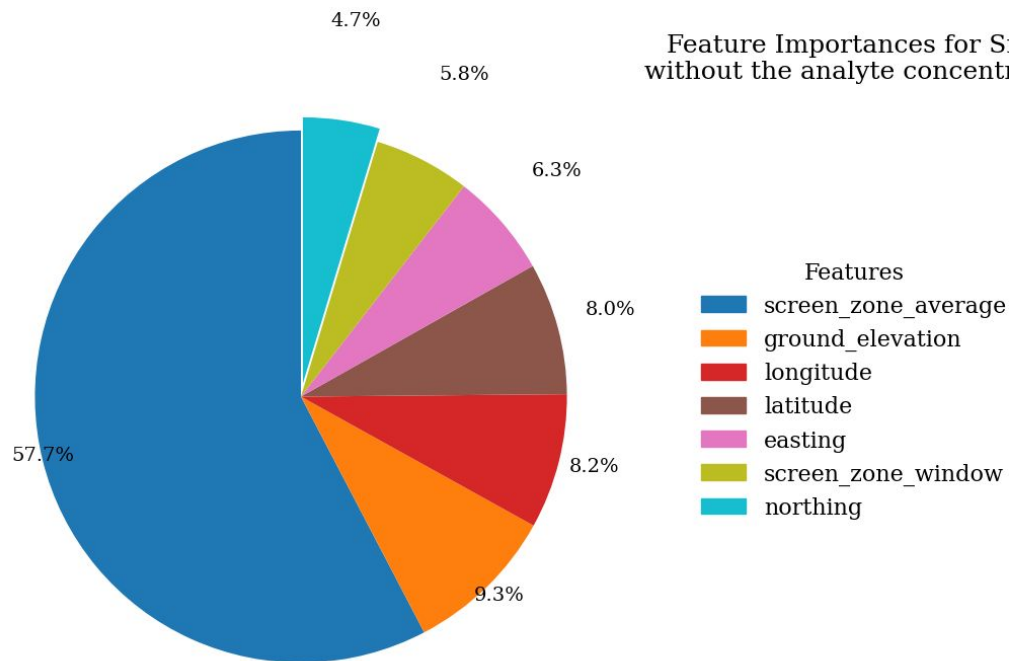
Feature Importances for Sr-90
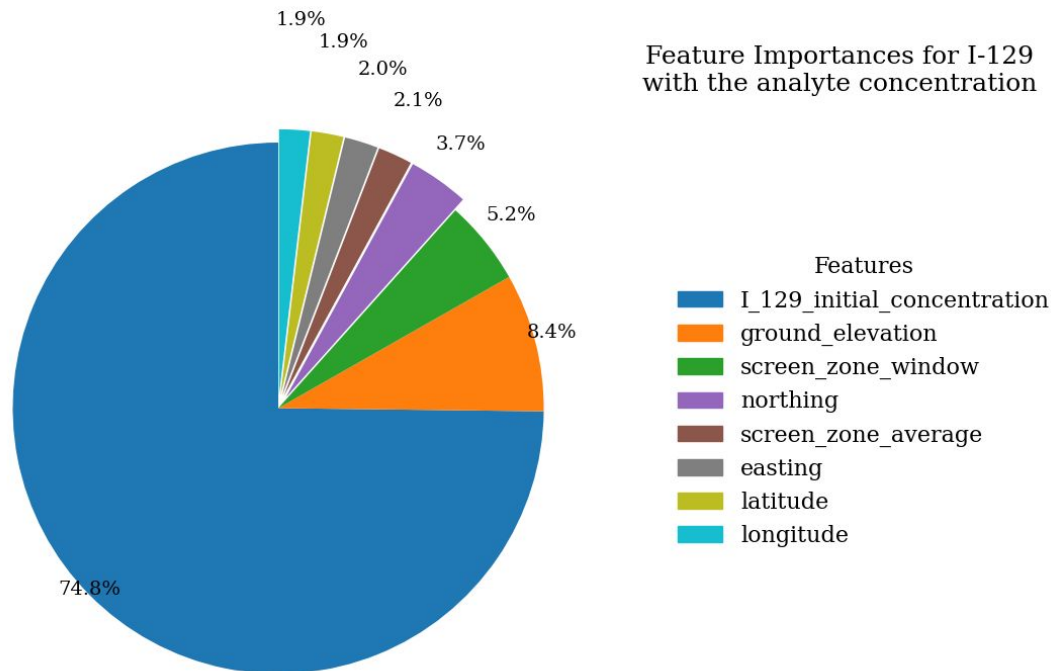with the analyte concentration

0.5%
0.5%
0.6%
0.6%
1.0%
3.0%
9.0%
84.7%

Features
- Sr_90_initial_concentration
- screen_zone_average
- ground_elevation
- screen_zone_window
- latitude
- easting
- longitude
- northing

- Cross-validated R^2 scores:

  [0.22666521 0.93560472 0.63664596
  -4.13316453 0.50821917]

- Mean R^2 score:
  -0.3652058935722769
- Mean Squared Error:
  9347983.15322222
- R^2 Score: 0.9774037043107859
- Feature Importances:
- Sr_90_initial_concentration   0.847391
- screen_zone_average   0.089659
- ground_elevation   0.030177
- screen_zone_window   0.010428
- latitude   0.006073
- easting   0.006044
- longitude   0.005237
- northing   0.004991

Feature Importances for Sr-90 without the analyte concentration

Feature Importances for Sr-90
without the analyte concentration

4.7%

5.8%

6.3%

8.0%

8.2%

9.3%

57.7%

Features
- screen_zone_average
- ground_elevation
- longitude
- latitude
- easting
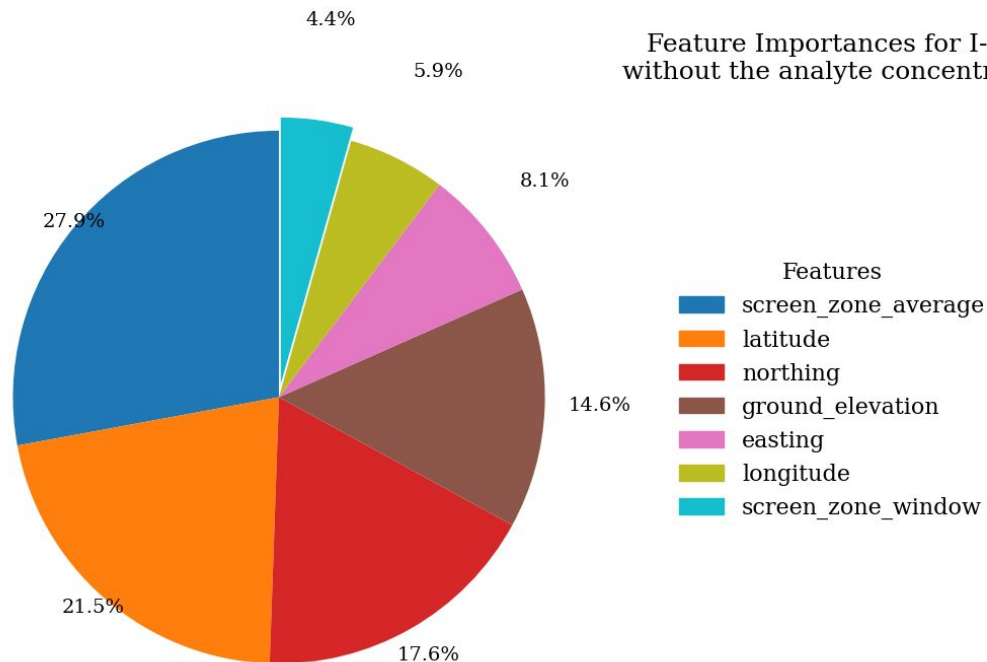- screen_zone_window
- northing

- Cross-validated R^2 scores:

  [-8.53244381   0.41649952
  0.24008787 -17.40124283
  -0.59614906]

- Mean R^2 score: -5.174649663500623
- Mean Squared Error:
  52733275.42929629
- R^2 Score: 0.8725311476571911
- Feature Importances:
- screen_zone_average   0.576686
- ground_elevation   0.092753
- longitude   0.081996
- latitude   0.080231
- easting   0.063388
- screen_zone_window   0.058293
- northing   0.046652

Feature Importances for I-129 with the analyte concentration

Feature Importances for I-129 with the analyte concentration

Features
- I_129_initial_concentration
- ground_elevation
- screen_zone_window
- northing
- screen_zone_average
- easting
- latitude
- longitude

- Cross-validated R^2 scores:

  [0.44451467 0.07415643 -3.91224243 -3.5010407   0.15295998]

- Mean R^2 score: -1.3483304086991073
- Mean Squared Error: 158758834.7273149
- R^2 Score: 0.8992293330473253
- Feature Importances:
- I_129_initial_concentration   0.748109
- ground_elevation   0.084127
- screen_zone_window   0.051528
- northing   0.036860
- screen_zone_average   0.020877
- easting   0.020431
- latitude   0.019421
- longitude   0.018646

Feature Importances for I-129 without the analyte concentration

Feature Importances for I-129
without the analyte concentration

Features

- screen_zone_average
- latitude
- northing
- ground_elevation
- easting
- longitude
- screen_zone_window

- Cross-validated R^2 scores:

  [-4.71532359 -0.44663049
  -14.109882   -0.85572685
  -14.93855185]

- Mean R^2 score:
  -7.0132229584067485
- Mean Squared Error:
  255291403.71792763
- R^2 Score: 0.8379561990101084
- Feature Importances:
- screen_zone_average   0.279070
- latitude   0.215394
- northing   0.175841
- ground_elevation   0.145904
- easting   0.080696
- longitude   0.059290
- screen_zone_window   0.043805

Feature Importances for I-129 without the analyte concentration