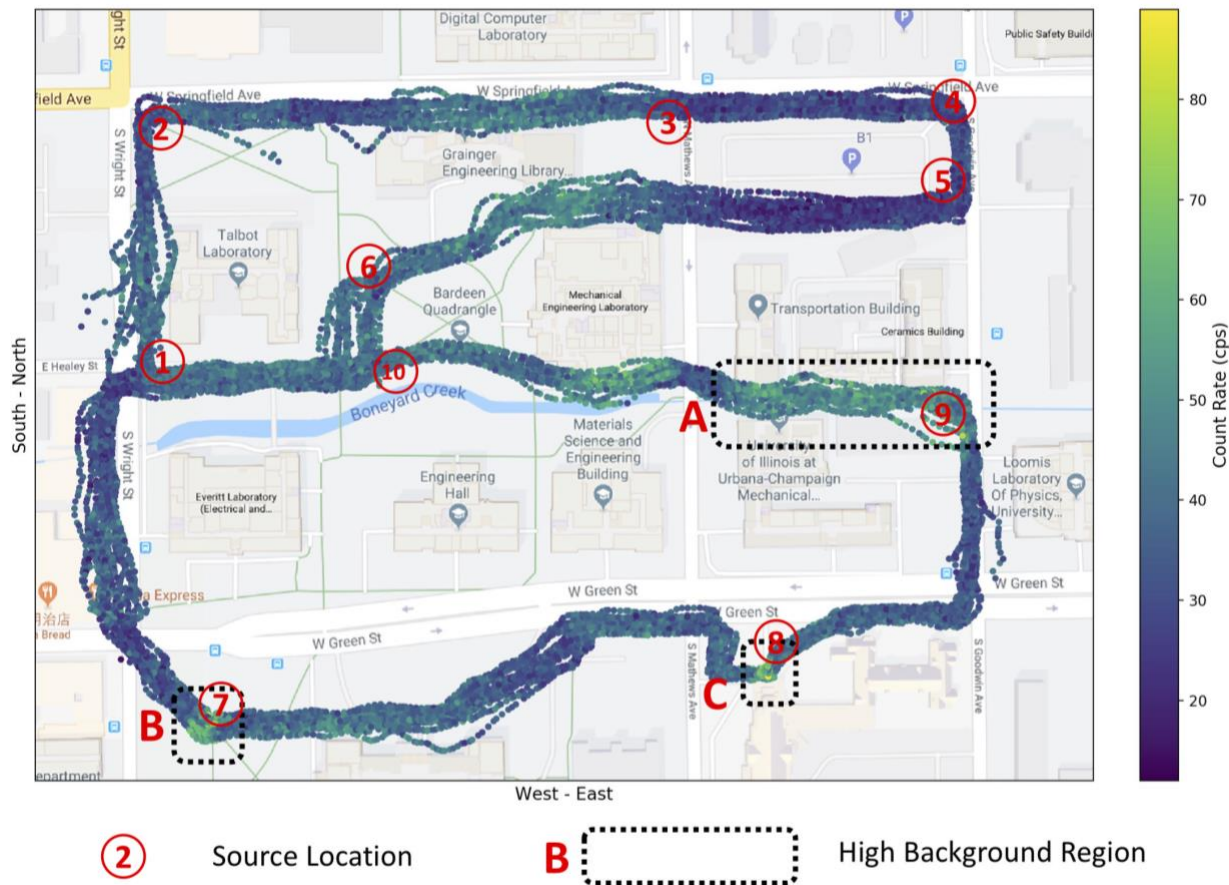


This folder contains nuclear radiation data collected in the campus of UIUC. A subset of the data is shown below. Each dot represents a measurement. And numbers from 1 to 10 represent the position of injected radioactive sources.



This folder contains 16 csv files in total. Each csv file has three columns:

Column Name	Description
x	Position of measurements in longitude direction (m)
y	position of measurements in latitude direction (m)
counts	gamma-ray counts rates in counts per second

The x and y positions are transformed using the original longitude and latitude. For privacy concerns, we have removed the time and original longitude and latitude information.

Among the 16 files, background.csv is the background radiation measurements collected without any radioactive sources. For the rest 15 files, they are named in the format of:

{source strength}uCi_{distance}m.csv

For each experiment, 10 radioactive sources are injected into different locations that are at certain distance away from the walking path. Source strength varies from 100 uCi to 2000 uCi, and distance to walking paths varies from 1 meter, 5 meter, and 10 meters. For example, 100uCi_1m.csv means that the simulated radioactive sources have the strength of 100 uCi, and

they are placed 1 meter away from the walking path. The influence of the injected radioactive source is reflected in the change of radiation counts. Not that, the influence of radioactive sources is limited to certain distance around the radioactive source. When the measurement is far away from the injected radioactive sources, there is no influence.

When source is placed 1 meter away from walking path, their positions are listed below:

No.	x (m)	y (m)
1	55.87	196.93
2	54.77	328.80
3	310.66	330.58
4	446.81	331.36
5	450.64	281.66
6	172.72	245.41
7	86.49	23.57
8	360.92	50.48
9	453.70	179.14
10	167.96	204.49

When source is placed 5 meters away from walking path, their positions are listed below:

No.	x (m)	y (m)
1	59.95	200.48
2	58.59	324.80
3	306.74	326.58
4	442.98	328.36
5	447.15	285.66
6	176.12	243.41
7	86.49	27.69
8	358.12	53.26
9	450.38	176.58
10	171.44	206.16

When source is placed 10 meters away from walking path, their positions are listed below:

No.	x (m)	y (m)
1	64.97	205.15
2	63.70	320.02
3	301.81	321.24
4	441.54	323.47
5	442.30	290.77
6	180.37	241.52
7	86.57	32.69
8	354.88	56.82
9	446.47	173.80
10	175.36	209.16