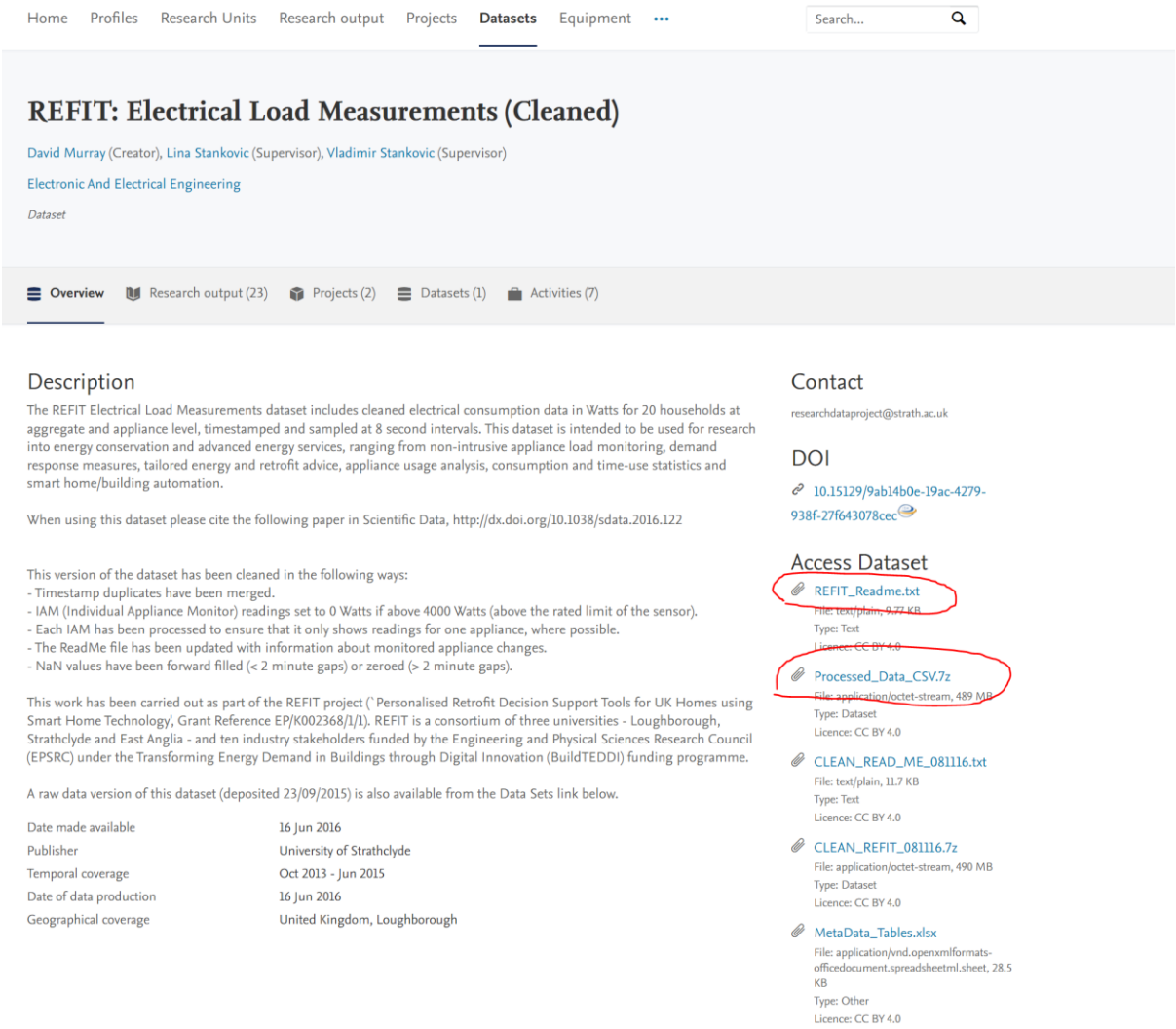
About DATA

The data is too big to upload.

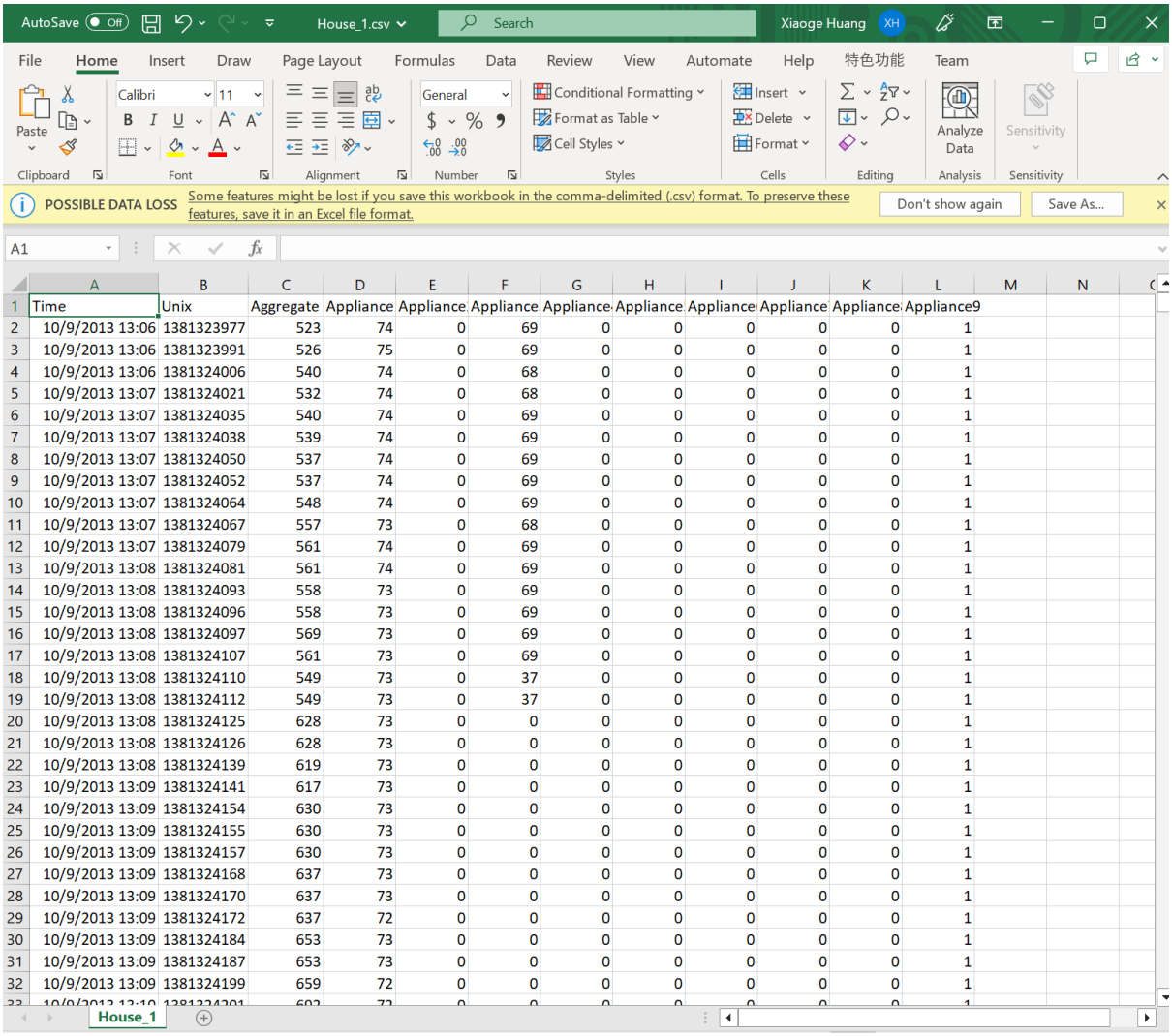
Go to this website: https://pureportal.strath.ac.uk/en/datasets/refit-electrical-load-measurements-cleaned



Click the .txt file to read the introduction of data.

Download the .7z file. It is the cleaned dataset in .csv tables.

The dataset contains data from 21 houses. Each house can be viewed as an independent load unit. For example, let us consider house 1 data as shown below:



	A	B	C	D	E	F	G	H	I	J	K	L
1	Time	Unix	Aggregate	Appliance	Appliance	Appliance	Appliance	Appliance	Appliance	Appliance	Appliance	Appliance9
2	10/9/2013 13:06	1381323977	523	74	0	69	0	0	0	0	0	1
3	10/9/2013 13:06	1381323991	526	75	0	69	0	0	0	0	0	1
4	10/9/2013 13:06	1381324006	540	74	0	68	0	0	0	0	0	1
5	10/9/2013 13:07	1381324021	532	74	0	68	0	0	0	0	0	1
6	10/9/2013 13:07	1381324035	540	74	0	69	0	0	0	0	0	1
7	10/9/2013 13:07	1381324038	539	74	0	69	0	0	0	0	0	1
8	10/9/2013 13:07	1381324050	537	74	0	69	0	0	0	0	0	1
9	10/9/2013 13:07	1381324052	537	74	0	69	0	0	0	0	0	1
10	10/9/2013 13:07	1381324064	548	74	0	69	0	0	0	0	0	1
11	10/9/2013 13:07	1381324067	557	73	0	68	0	0	0	0	0	1
12	10/9/2013 13:07	1381324079	561	74	0	69	0	0	0	0	0	1
13	10/9/2013 13:08	1381324081	561	74	0	69	0	0	0	0	0	1
14	10/9/2013 13:08	1381324093	558	73	0	69	0	0	0	0	0	1
15	10/9/2013 13:08	1381324096	558	73	0	69	0	0	0	0	0	1
16	10/9/2013 13:08	1381324097	569	73	0	69	0	0	0	0	0	1
17	10/9/2013 13:08	1381324107	561	73	0	69	0	0	0	0	0	1
18	10/9/2013 13:08	1381324110	549	73	0	37	0	0	0	0	0	1
19	10/9/2013 13:08	1381324112	549	73	0	37	0	0	0	0	0	1
20	10/9/2013 13:08	1381324125	628	73	0	0	0	0	0	0	0	1
21	10/9/2013 13:08	1381324126	628	73	0	0	0	0	0	0	0	1
22	10/9/2013 13:08	1381324139	619	73	0	0	0	0	0	0	0	1
23	10/9/2013 13:09	1381324141	617	73	0	0	0	0	0	0	0	1
24	10/9/2013 13:09	1381324154	630	73	0	0	0	0	0	0	0	1
25	10/9/2013 13:09	1381324155	630	73	0	0	0	0	0	0	0	1
26	10/9/2013 13:09	1381324157	630	73	0	0	0	0	0	0	0	1
27	10/9/2013 13:09	1381324168	637	73	0	0	0	0	0	0	0	1
28	10/9/2013 13:09	1381324170	637	73	0	0	0	0	0	0	0	1
29	10/9/2013 13:09	1381324172	637	72	0	0	0	0	0	0	0	1
30	10/9/2013 13:09	1381324184	653	73	0	0	0	0	0	0	0	1
31	10/9/2013 13:09	1381324187	653	73	0	0	0	0	0	0	0	1
32	10/9/2013 13:09	1381324199	659	72	0	0	0	0	0	0	0	1

A straightforward task is exploring how the values of the 9-“appliance” can be determined with a given value of “aggregate.”

This task is currently general, as the paper's narrative, technical roadmap, and performance evaluation metrics can be tailored to make sense from perspectives either in computer science or power engineering.

PS:

1. The unit of those values is W.
2. The “aggregate” value is from the electrical meter from the whole house, which means the “aggregate” value is not necessarily equal to the sum of 9-“appliance” value.