How do we do that?

Firstly, we used an Activity Recognition API provided by Google to detect the motion that the user is in.

App uses the accelerometer to continuousy collect the sensor data.

Finally, this data is ultimately used to detect the crash.

Out[20]:

	Timestamp	Milliseconds	X	Y	Z	g_force	crash
0	2022-11-03 22:54:24	1.0	-2.568978	6.327875	5.537788	8.792540	0
1	2022-11-03 22:54:26	1502.0	-1.448492	6.478710	6.938396	9.602768	0
2	2022-11-03 22:54:27	3002.0	1.022324	5.975927	8.631097	10.547639	1
3	2022-11-03 22:54:29	4501.0	-2.564190	6.603208	11.324574	13.357522	1
4	2022-11-03 22:54:30	6001.0	-0.265756	6.806716	7.481880	10.118326	1
...	...	...	...	...	...	...	...
167	2022-11-03 22:58:35	250502.0	-3.624821	5.616797	10.237606	12.226869	1
168	2022-11-03 22:58:36	252001.0	-0.696713	4.632780	7.917625	9.199829	0
169	2022-11-03 22:58:38	253502.0	-0.067038	5.748478	7.211336	9.222411	0
170	2022-11-03 22:58:39	255001.0	-1.120486	6.579266	6.100426	9.041981	0
171	2022-11-03 22:58:41	256501.0	-0.349553	5.770026	8.829816	10.553722	1

172 rows × 7 columns

dataset of accelerometer