Feature set - Towards the development of a realistic multidimensional IoT profiling

	Column in dataset	Readable column name	Description
1	**L4_tcp**	TCP	The transmission control protocol is used to connect network devices to the internet (ConnectionOriented).
2	**L4_udp**	UDP	User datagram protocol is used for establishing low-latency and loss-tolerating connections (Connectionless).
3	**L7_http**	HTTP	Hypertext transfer protocol is used to deliver data on the world wide web (WWW)
4	**L7_https**	HTTPS	Secure version of HTTP
5	**ip_padding**	IP Padding	Padding is basically used to make sure that the IP packet header has a length that is a multiple of 32 bits
6	**ip_ralert**	Router Alert	Used to inform a router that the current IP packet has some peculiarities that should be studied before it is forwarded on. Service
7	**port_class_src**	Source Port number class	Port number class, No port = 0, well known port (0,1023) = 1, registered port (1024,49151)=2, dynamic port (49152,65535) =
8	**port_class_dst**	Destination Port number class	
9	**pck_size**	IP packet size (length)	Entire packet size in bytes including IP header embeded protocol headers and data. 16-bit field.
10	**pck_rawdata**	Raw Data	Data that has not been processed for use
11	**ip_dst_new**	Destination IP address	Destination IP address of the IoT Device
12	**ethernet_frame_size**	Ethernet Frame size	Type of the Ethernet frame used by the device
13	**ethernet_frame_type**	Ethernet Frame type	The frame size of a standard Ethernet frame is the sum of the Ethernet header, the payload, and the Frame Check Sequence (FCS) field.
14	**ttl**	TTL for TCP and UDP packets	Time to live (TTL) or hop limit is the lifespan or lifetime of a packet.
15	**total_length**	Total Packet Length	Packet size including header
16	**protocol**	Protocol (L3, L4,L7)	Protcols used in layerr 3, 4 and 5
17	**source_port**	Source Port	Source Port of the device
18	**dest_port**	Destination Port	Destination Port of the device
19	**DNS_count**	DNS count	Number of DNS request
20	**NTP_count**	NTP Count	Number of NTP requests
21	**ARP_count**	ARP Count	Number of ARP requests
22	**cnt**	Number of Protocols (Protocol count)	Number of protocols used by the device
23	**L3_ip_dst_count**	Number of destinations IP	Number of destination IP addresses accessed by the IoT device
24	**most_freq_d_ip**	Most Frequent Destination IP address	Destination IP address that is visited most frequently
25	**most_freq_prot**	Most Frequent Protocol	The protocol that is used most frequently
26	**most_freq_sport**	Most Frequent Source Port	source port number used more frequently
27	**most_freq_dport**	Most frequent distination port nu	Port number that is most frequently accessed by the IoT device.
28	**sum_et**	Sum of packet size	Aggregate of the data
29	**min_et**	Minimum packet	Minimum ip packet size in in 20 packets
30	**max_et**	Maximum packet	Maximum ip packet size in 20 packets
31	**med_et**	Median packet	The median of ip packet size in 20 packets
32	**average_et**	Average packet	Average length of the ip packet in 20 packets
33	**var**	Variance packet	The measurement of the spread between numbers in 20 packets
34	**q3**	third quartile packet	The central point that lies between the median and the highest number of distribution
35	**q1**	first quartile packet	The middle number that falls between the smallest value of the data set and the median.
36	**iqr**	inter-quartile packet	The amount of spread in the middle 50% of 20 packets
37	**sum_e**	Sum of frame	Aggregate of the data
38	**min_e**	Minimum ethernet	Minimum ethernet size in in 20 packets
39	**max_e**	Maximum ethernet	Maximum ethernet size in 20 packets
40	**med**	Median frame	The median of ethernet size in 20 packets
41	**average**	Average frame	Average length of the ethernet frame in 20 packets
42	**var_e**	Variance frame	The measurement of the spread between numbers in 20 packets
43	**q3_e**	third quartile frame	The central point that lies between the median and the highest number of distribution.
44	**q1_e**	first quartile ethernet	The middle number that falls between the smallest value of the data set and the median.
45	**iqr_e**	inter-quartile frame	the amount of spread in the middle 50% of 20 packets
46	**epoch_timestamp**	epoch timestamp of packet	The time stamp the specific packet was recorded
47	**inter_arrival_time**	inter arrival time	The time between the current and previous packet
48	**time_since_previously_displayed_frame**	time since previously displayed frame	The time between the current packet and the first packet that was captured.