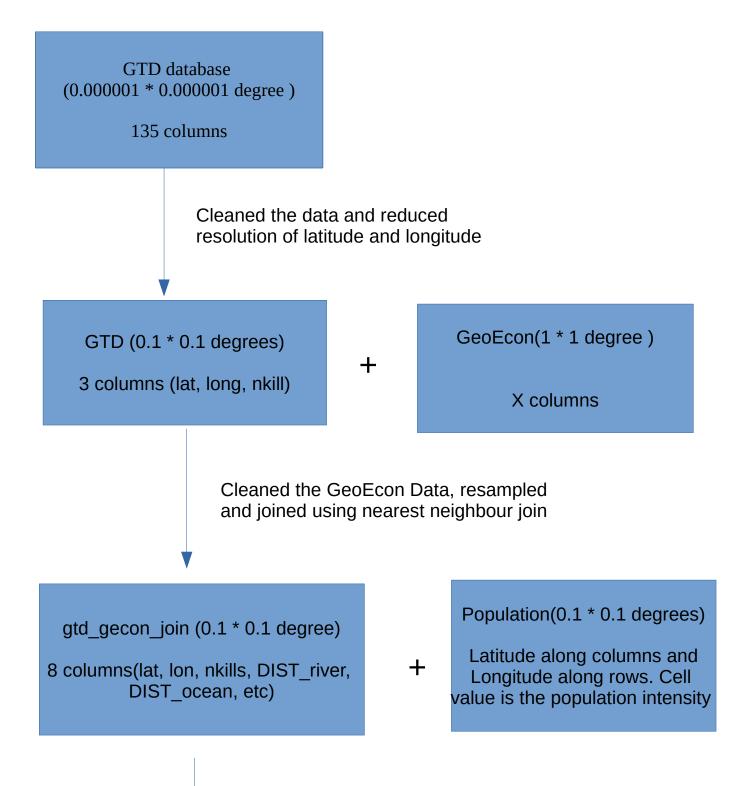
## DATAFLOW DIAGRAM



New column added based on Lat and Lon lookup in population dataset GTD\_Gecon\_Pop
(0.1 \* 0.1 degrees)

9 columns
(lat, lon, DIST\_river, dist\_ocean, population intensity)

Using geosptial join and grouping by latitude and longitude, the generated file is used as reference to add new column

GGP\_geoEPR (0.1 \* 0.1 degrees)

10 columns (lat, lon, DIST\_river, DIST\_ocean, population intensity, num\_of\_groups)

+ Latitude along columns and Longitude along rows. Cell value is the DEM value.

New column added based on Lat and Lon lookup in population dataset

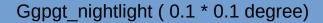
GGPG\_topography (0.1 \* 0.1 degrees)

11 columns (lat, lon, DIST\_river,
DIST\_ocean, population intensity,
num\_of\_groups, DEM )

Nightlight intensity
(0.1 \* 0.1 degree)

(avg. value of night
light intensity)

Tracing the latitude longitude from the processed nightlight intensity.



12 columns ((lat, lon, DIST\_river, DIST\_ocean, population intensity, num\_of\_groups, DEM, avg\_int)

Happiness Index
+ (country level resolution)

Happy\_index (col)

Latitudes and longitudes are mapped to respected countries and the happy\_index value is alloted to each sample

Final (0.1 \* 0.1 degrees)

13 columns (lat, lon, DIST\_river, DIST\_ocean, population intensity, num\_of\_groups, DEM, avg\_int, happy\_index)