Note:

1. Param-parser: define and initialize parameters

2. Graph2vec: transform graph to vector through document to vector built in library

3. Node\_extraction: transform image to graph in \*.json file including edges and node features

Node feature:

**Node Attributes**: We know that the nodes in a graph represent entities and these entities have their own characteristic attributes. We can use these attributes as features for each and every node. For example, in an airline route network, the nodes would represent the airports. These nodes would have features like aircraft capacity, number of terminals, landing area, etc.

**Local Structural Features**: Node features like degree (count of adjacent nodes), mean of degrees of neighbor nodes, number of triangles a node forms with other nodes, etc.

**Node Embeddings**: The above-discussed features carry only node related information. They do not capture the information about the context of a node. By context, I mean the surrounding nodes. Node embeddings address this issue to a certain extent by representing every node by a fixed-length vector. These vectors are able to capture information about the surrounding nodes (contextual information)