In this project, given an environment with static and dynamic obstacles and a set of points representing humans with their field of view (with a direction, angle of view and maximum distance) in this environment, it is aimed to allow querying the k nearest neighbors of any of the points so that the result set is the set of k (or less) points that are within the visible zone of the queried point and nearest. In other words, we need to fetch which other people a person sees. Note that this process should take static and dynamic obstacles into account.

We are proposing to use the following document as our possible reference. In the reference paper, it is proposed to use two different algorithms; first capturing the initial, static snapshot of view area and update the result for dynamic objects by repeating the process in efficient way. The algorithms works in 2D and works by considering the plane in grid structure. We will consider to enhance the vanilla algorithm by proposing different approaches to problem.

Reference Paper: