Product Vision for Modelling Unmanned Aerial Swarms using Unreal Engine and AirSim Simulator

Our vision is to produce a simulation of a swarm of Unmanned Aerial Vehicles (UAV) within a three-dimensional environment. A swarm is defined as a multitude of UAV moving and communicating in a unified, cohesive manner. All UAV will routinely communicate its respective position and other behavioral data to the swarm. The data will then transmit to the ground control (user). The swarm will gather data, such as the volume of objects in the environment. The swarm will travel along a predetermined path towards an objective. While moving around the environment, UAV will detect objects and initiate collision avoidance if a collision is detected. This shall include avoidance of both static and moving obstacles.