

Navigation sciences are concerned with the study and design of systems and methods for determining the position and direction of moving objects, such as vehicles, robots, or animals. Navigation sciences use various techniques, such as sensors, maps, algorithms, and signals, to provide accurate and reliable information about the location and orientation of the navigators. On one hand, navigation sciences can benefit from artificial intelligence by using its techniques to improve the performance and efficiency of navigation systems, such as enhancing the accuracy, robustness, adaptability, and autonomy of the navigators. On the other hand, artificial intelligence can benefit from navigation sciences by using its problems and solutions as inspiration and validation for new algorithms and models, such as learning from the navigation strategies of animals or testing the intelligence of robots in realistic scenarios. Artificial intelligence uses various methods, such as neural networks, logic, optimization, and machine learning, to enable computers to understand and interact with complex data and environments. The intersection of navigation sciences and artificial intelligence is a fertile ground for research and development.