NAME: KANAK JOSHI
SRN: PES1PG22CS021
SUBJECT: STOCHASTIC MACHINE LEARNING

This report discusses the design and operation of Autonomous Personal Air Travel Vehicles (APAV), also known as eVTOL aircraft, which use electric power to take off and land vertically. The report outlines the considerations involved in designing an APAV, such as size, weight, propulsion, avionics, and control systems. It also discusses the critical aspects of APAV's safe and efficient operation, such as flight planning, navigation, and communication. The report defines the machine learning problem for an APAV, which involves designing an algorithm to ensure collision avoidance in a non-deterministic environment using real-time data from sensors and navigation systems. The report concludes that further advancements in technology and continued research in machine learning have the potential to revolutionise the transportation industry.

The key learning outcomes for an eVTOL learning problem involve developing domain knowledge required to design, implement and maintain a system in a complex and non-deterministic environment. This includes understanding the challenges associated with eVTOL, collecting and processing raw data from various sensors and external sources, and deploying a trained model that is scalable, available, and reliable. The model should also be continuously monitored to make necessary updates and improvements over time.