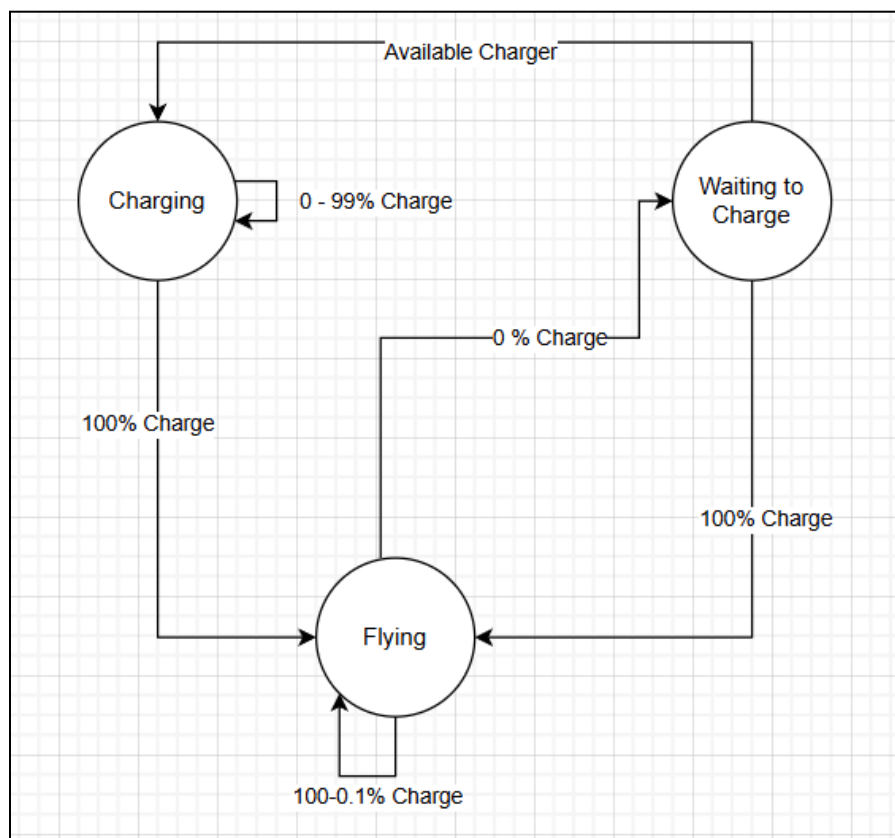# Joby Plane Simulator Design Document

Overview

1. **Simulator.setup()** - This will generate a random list of **n** planes (and **m** chargers) based on config provided to the sim constructor and "attach" them to the simulator.

2. **Simulator.run()** - Simulate **n** planes operating in a basic state machine. If the plane is fully charged, it will immediately fly at full cruise speed. Once drained, the plane will attempt to charge, if all chargers are full, we wait for the next available charger. (See State Diagram)

3. **Simulator.printStatistics()** - Compiles data from all simulated planes and outputs various information to the console. HINT: Use after you have run the simulator.

Finite State Machine

Class Diagram

main

Prep Configs

Initalizes

Simulator

Generates

Statistics

Manages List

Manages List

eVTOL Class

eVTOL Factory

eVTOL Constructor

eCharger Class

eVTOL Parameters
Vehicle Attributes
- Speed
- Battery Cap
- Etc..

Templates