**Driverless Car**

1. Identify three features relevant to the driver-free parking feature.

* A Sensor Signal
* A camera
* A Radar

1. Describe each of the three features as a use case

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| **Use case Name** | A Sensor signal |
| **Actor** | Driverless Car |
| **Description** | A sensor to observe and scan in multiple directions for a parking spot |

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| **Use case Name** | A camera |
| **Actor** | Driverless Car |
| **Description** | A camera provides necessary input to navigate the car safely and check its surroundings. |

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| **Use case Name** | A Radar network |
| **Actor** | Driverless Car |
| **Description** | Used to determine the distance of objects, facing angle and speed of the vehicle. |

1. Describe each of the same features as user stories

* **As a** driverless car **I want** to check/observe and scan parking spot using Sensor signal **so that** will get parking space.
* **As a** driverless car **I want** to open a camera **so that** will see and check surroundings objects and monitoring parking spaces at once.
* **As a** driverless car **I want** to check radar network **so that** can determine distance of objects.

1. Describe the advantages and disadvantages of use cases and user stories for this task?

**Advantages**

* **A Sensor signal** is reflected as the most adaptable and dynamic way to address parking problems.
* **A Radar Network**is more relevant to use as it uses electromagnetic waves because it is less affected by environmental variables like weather, light, and so on

**Disadvantages**

* A sensor signals are more expensive and may require special high-frequency circuit design.
* In radars network, signal processing requires much MCU power and it’s a very costly.