DIGITAL TWIN OF AN ELECTRIC VEHICLE

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# TASK 1: Identify the System, Its Form and Function

# TASK 2: Identify the entities of the system, their form and function and the system boundary and context

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| System | Entity Function | Entity Form | Form |
| Electric Vehicle | Converts electrical energy  into mechanical energy  Stores electrical energy  Converts DC to AC  Connect to an electricity source  Manages subsistems  Manages the battery  Manages the temperature of system components  Transfers mechanical power    Converts kintic energy into electrical energy | Electric Motor  Battery Pack  Inverter  Charging Port  Vehicle Control Unit  Battery Management System  Thermal Management System  Transmission  Regenerative Braking System | The Electric Vehicle  Lithium-ion cells  Digital Device  A connector  Embedded  Computer  Sensors and computing units  Heat exchangers, coolant lines  Single-ratio transmission  Special motor |

# Task 3: Identify the Relationships among the Entities

# Task 4: Predicting Emergence