

SRM INSTITUTE OF SCIENCE & TECHNOLOGY														
Department of Computing Technologies, Faculty of Engineering and Technology														
Final Year Major Project/Internship Evaluation Form														
Academic Year 2023-24														
Degree Programme			B.Tech B.Arch B.Des M.Tech M.Arch				Type of Project work (Multi selection permitted)							
Campus			KTR RMP VDP NCR				Bio Project			Fabrication Project				
REMARKS, If any :			Batch ID:				Chemical Project			Industry Project / Internship				
			CIN_218				Design / Simulation Project			Software Project		Yes		
							Experimental / Testing Project							
			1		2		3		4		5		6	
Name of the student			Krishna Kant Pandey				A. Bhavani Shankar							
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			1		2		3		4		5		6	
			In case the explanation doesn't fit within the given space, you may either merge the cells or attach separate sheet											
Q1: How does the spaceship agent determine its movement in the simulation?			The spaceship agent uses a neural network that processes observations about its position relative to targets and obstacles. It receives actions from the trained policy, which dictate movement along x and y axes based on continuous action outputs from the neural network.											
Q2 What role does the "OnEpisodeBegin()" method play in the simulation?			`OnEpisodeBegin()` resets the environment at the start of each training episode. It randomizes the positions of the spaceship and the target to prevent the model from overfitting and to ensure that the agent can generalize its learning across a variety of scenarios.											
Q3 How is the training environment set up for the spaceship agent?			The training environment in Unity includes a spaceship (agent), targets, and possibly obstacles. It's configured to provide the agent with different initial conditions and challenges, helping it learn to navigate towards goals under varying circumstances using the ML-Agents toolkit.											
Q4 What is the significance of using Proximal Policy Optimization(PPO) for this project?			PPO is chosen for its effectiveness in dealing with environments of high complexity and continuous action spaces, like navigating a spaceship. It helps in achieving stable and efficient training by optimizing the policy update step, ensuring robust learning without drastic policy changes.											
Q5 How are rewards structured in the simulation to guide the agent's learning?			Rewards are structured to encourage specific behaviors: the agent receives positive rewards for successfully reaching a target and negative penalties for undesirable actions like crashing into walls. This reward system reinforces learning by guiding the agent towards successful strategies and away from unsuccessful ones.											

Instructions to the Panel Heads / Guides : The guides/ Panel Heads / Panel Members are requested to give 5 specific project and domain relevant questions to the project batches. These question should prove the knowledge level of the students about the project and the level research conducted by the student to complete project. The question can even be relevant to domain/algorithms/formulations/data set/ code/testing/output verification.