

## Default Question Block

### Survey of Common Challenges in Development of Deep Reinforcement Learning (DRL) Applications

Your email address (optional)

What is your current job title?

Developer, Researcher, ... (For students, please indicate the degree: PhD student, Master)

What is your overall work/research experience with Deep Reinforcement Learning (DRL)?

Which programming languages have you been using to develop DRL applications?

C/C++, Java, Python, ...

Which frameworks have you been using to develop DRL applications?

Tensorflow, keras, PyTorch, Keras-rl, Python-rl, ...

We are concluded with 5 high-level common challenges in DRL development including 1) DRL basic knowledge, 2) DRL library/framework usage, 3) parallel processing & multi-threading, 4) DL knowledge, and 5) general programming issues.

Have you ever encountered challenges related to DRL basic knowledge?

[illegible]

Have you ever encountered challenges related to DRL library/framework usage?

[illegible]

			How severe was the challenge/issue			How much effort was required to handle this challenge/issue		
	Yes	No	Minor	Major	Critical	Low	Medium	High
<b>API usage</b> Challenges about the usage of arguments, attributes, methods, etc. of the DRL framework's API.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Documentation</b> When people want to use a feature of an DRL library/framework, but there is no documentation about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Bugs inside frameworks</b> Challenges which are related to the identified bugs inside DRL framework.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Best fitted library for a special task</b> When the developer is unsure about the best DRL library/framework for a special DRL algorithm/task .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you ever encountered challenges related to parallel processing & multi-threading?

			How severe was the challenge/issue			How much effort was required to handle this challenge/issue		
	Yes	No	Minor	Major	Critical	Low	Medium	High
<b>GPU usage</b> Challenges regarding utilizing GPU for running DRL applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Multi-threading</b> Challenges about running DRL applications as a multi-threading software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Multi-processing</b> Challenges in running DRL applications in a multi-processing maner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Distributed systems</b> Challenges in running DRL applications as a distributed systems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you ever encountered challenges related to DL knowledge?

			How severe was the challenge/issue			How much effort was required to handle this challenge/issue		
	Yes	No	Minor	Major	Critical	Low	Medium	High
<b>Model</b> Challenges regarding DL model including model's layer, activation function, load/save model, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Data preprocessing</b> Challenges in preparing data to train the DL model with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>DL framework</b> Challenges about usage of DL frameworks in DRL applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you ever encountered any challenges/issues related to DRL that have not been mentioned in this survey? If yes, could you please describe them?

Any other comments: