

# A. Appendix: Deploying the App

## Deploying the Multi Agent Reinforcement Learning with Highway-Env Application

To deploy the `app.py` Streamlit App, follow these steps:

1. **Set up the environment:** Ensure that Python is installed, and create a virtual environment to manage dependencies. (`virtualenv`, `pyenv` or `conda` can be used for this).

Install Streamlit and other dependencies by running:

```
$ cd app
$ pip install streamlit
$ pip install -r requirements.txt
```

2. **Run the Streamlit app:** Start the app using the following command in the terminal:

```
$ streamlit run app.py
```

This will start the Streamlit app, and it will usually open in a local browser window.

3. **Access the application in a browser:** After running the command, the app should automatically open in the default web browser at a local address (e.g., `http://localhost:8501`). If it doesn't, you can manually open a browser and navigate to this URL to interact with the app.

**Required Files:** The directory in which the app runs should contain at least the following files and directories:

- app.py*: main file
- style.html*: auxiliary file
- requirements.txt*: python environment configuration file
- subdirectory *Train\_and\_Test* containing the Python files concerning training and testing as well as the saved models
- subdirectory *images* containing pre-processed tensorboard log plots
- subdirectory *global\_metrics\_plots* containing pre-processed metrics plots
- subdirectory *latex* containing latex code for mermaid graphs
- subdirectory *videos* containing simulation recorded videos

**Required Python Packages:** (Listed on *requirements.txt*):

```
matplotlib==3.9.2
pandas==2.2.3
seaborn==0.13.2
streamlit==1.40.1
streamlit-mermaid==0.3.0
```