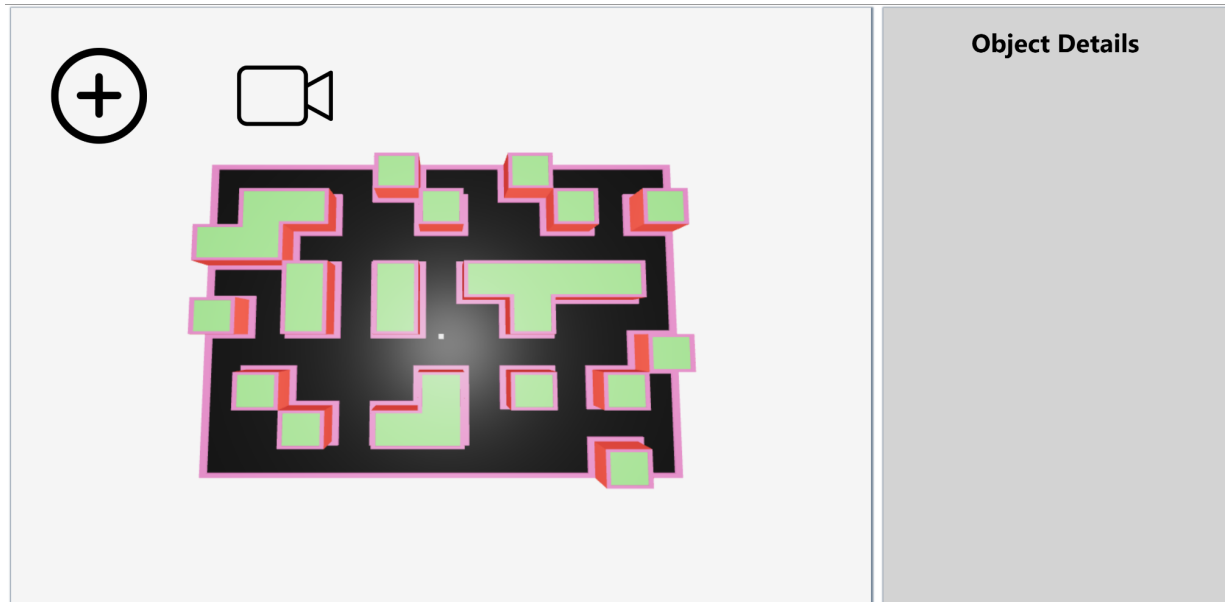


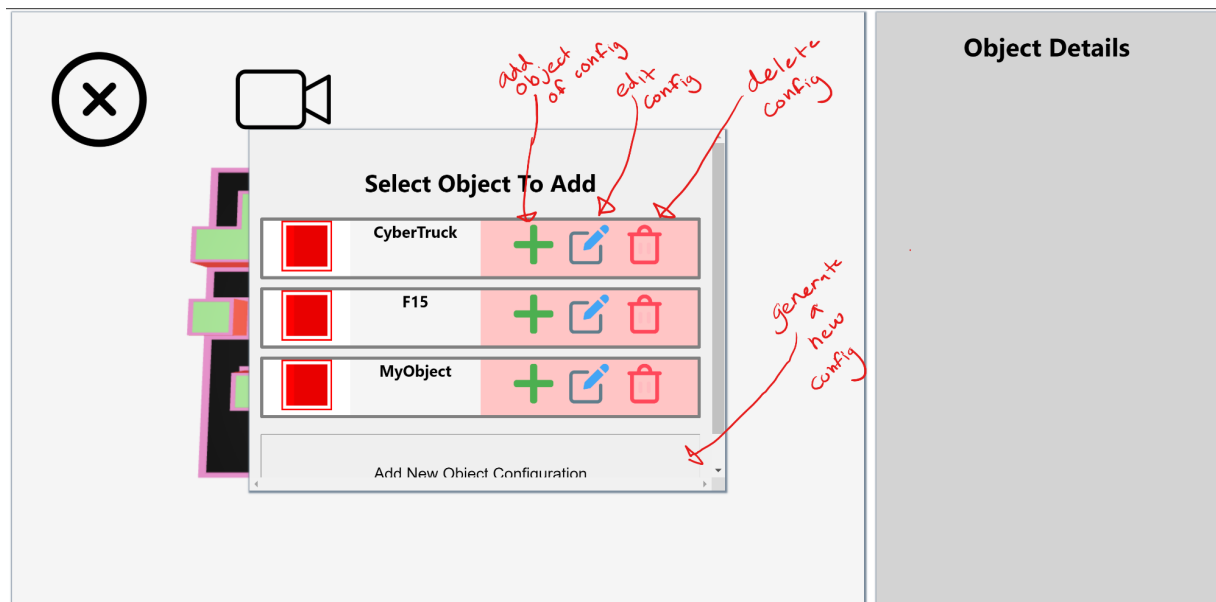
# User Guide to the Tesla Challenge Site

By: Fawaz Mujtaba

The following website is a fun and interactive experience allowing users to create object configurations within a MongoDB, spool up simulated objects streaming data of those object configurations, and bounce around in a 3D map environment.



The home menu greets the user with a map and object details panel. Clicking the camera button will cycle the camera through two distances. Clicking the plus button will open up the Object Configuration Menu



The Object Configuration Menu allows users to generate some pre-built config objects or generate some new configurations of their own. Note that only the prebuilt objects currently support movement. Just a design choice to allow the user to make modifying the location of their own objects a little easier

The screenshot shows a web interface with a sidebar on the left containing a close button (X in a circle), a video camera icon, and a stack of colored rectangles. The main area displays a dialog box titled "Enter Config Values". The dialog contains the following fields: "id" (pre-filled with "fadcd83d-7237-40b2-9d58-da4340e638c2"), "title" (text input with "MyNewObject"), "loc\_X" (text input with "0"), "loc\_Y" (text input with "0"), "loc\_Z" (text input with "0"), "speed" (text input with "28"), and "DynamicData" (text input with "DynamicData"). There are "Delete" and "Add New Field" buttons. To the right of the dialog is a grey panel titled "Object Details".

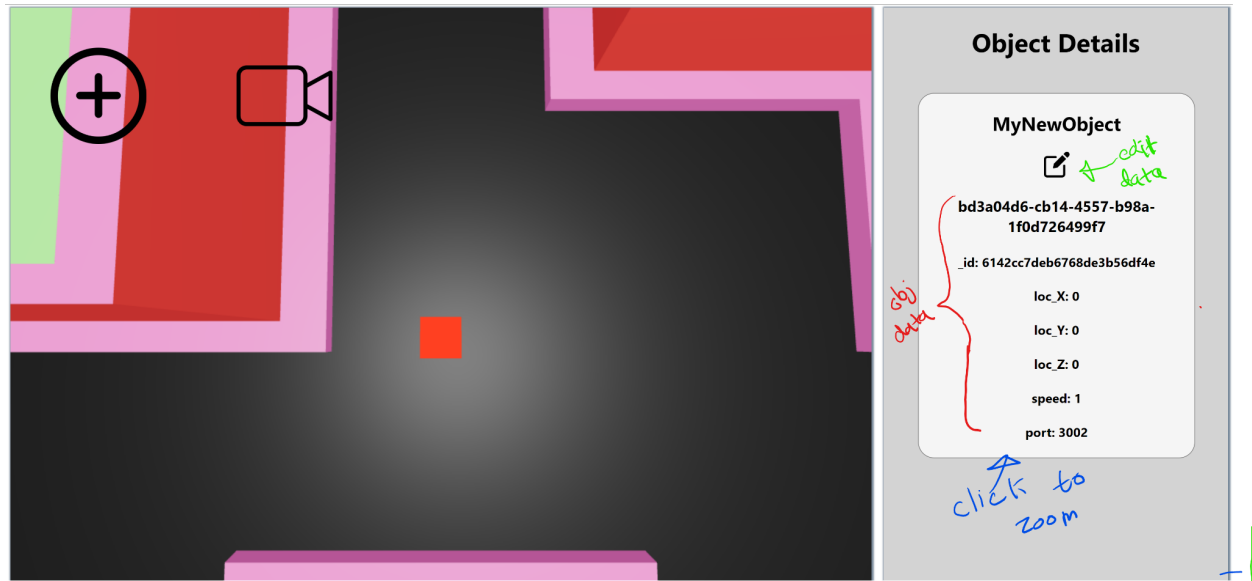
Adding a new configuration allows users to dynamically add as many fields as they desire with the only requirements being that the location and title be present in the configuration.

The screenshot shows the same web interface as before, but the dialog box is titled "Select Object To Add". It contains a table with four rows, each representing a configuration object:

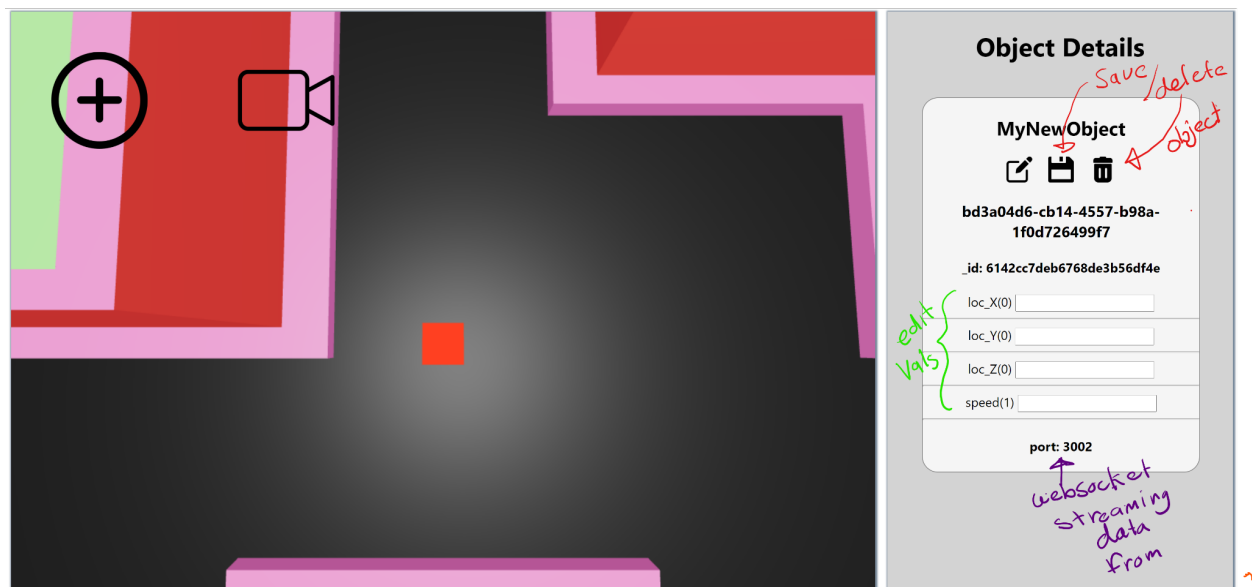
Object	Actions
CyberTruck	+ [edit icon] [trash icon]
F15	+ [edit icon] [trash icon]
MyObject	+ [edit icon] [trash icon]
MyNewObject	+ [edit icon] [trash icon]

Handwritten annotations include: a red arrow pointing to the close button (X) with the text "click to exit config"; a green circle around the plus sign in the "MyNewObject" row with the text "add new object"; and a blue arrow pointing to the plus sign with the text "New config added to database". The "Object Details" panel is visible on the right.

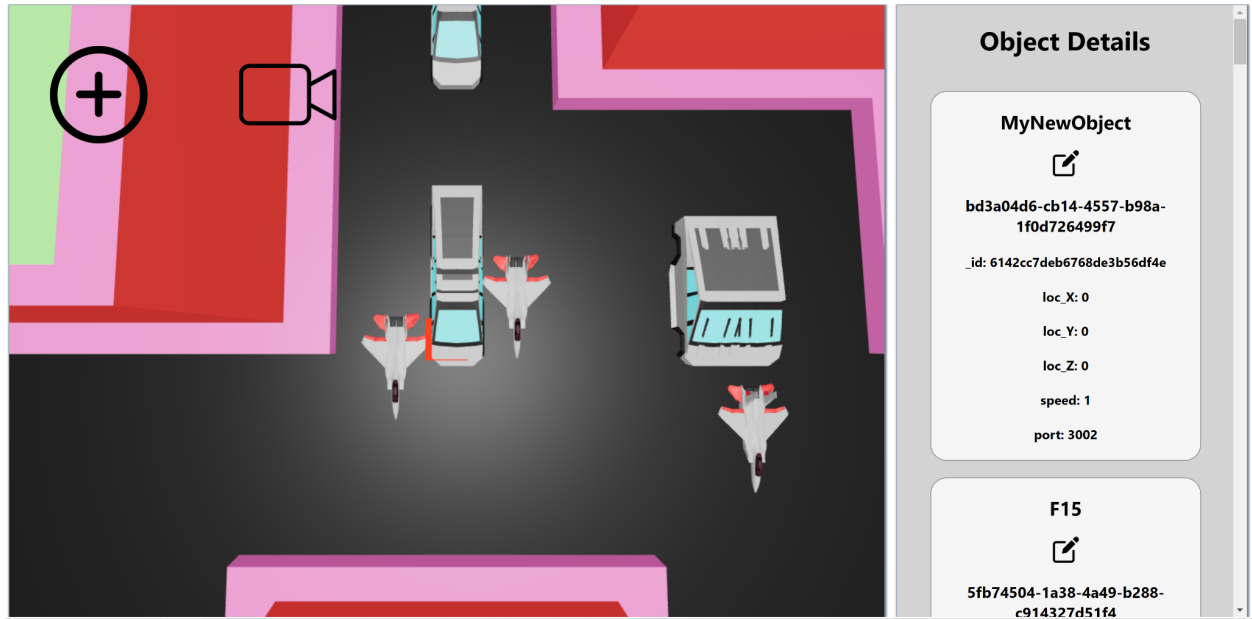
Once the configuration is added, the user may press the “plus” button to add the configuration to the simulator which will then stream data through a websocket to the site. Click the “X” button to close the configuration panel.



You can now see your newly added item in the world. Clicking on the object in the “Object Details” panel also allows the user to zoom in on the object on the map. You can also edit the data which will be sent back to the simulator to update it. This includes updating the location or the speed of the object. (Speed is relevant to the CyberTruck!)



Note that the port number the object is connected to is also shown. The user also has the ability to delete the object by clicking on the trash can. This does NOT delete the configuration however.



Once you add many CyberTrucks or F-15s you can see a really fun scene begin to develop!  
Thank you for visiting/using this site