SYSTEM OVERVIEW AND USED TECHNOLOGIES

TheUplat is an easier and better learning platform with open source ROS tutorials. These tutorials can be started from anywhere without dealing with complex ROS setups. All the tools necessary for tutorial are presented with a simplified interface, considering user experiences. These tools are presented to the user through the web interface using cloud technology and container technology. When a user launches a tutorial, a user-specific Ubuntu virtual machine is created through the Amazon Web Service (AWS). Thanks to AWS, Uplat is a platform with high accessibility and high speed. In the virtual machines created, Gazebo Web (gzweb), Theia and Jupyter Notebook tools are presented ready for the user. In addition, by presenting the ROS environment to the user in an installed form, the user can get ROS tutorial without the hassle of installing the ROS, which is a very troublesome process, and the required Unix/Linux operating system installation beforehand. Thanks to gzweb, the robot is simulated according to the code written by the user. In this way, the user can instantly observe the operation of the code. As for Theia is an integrated development environment. This application provides support for writing code in many languages. Also, with the terminal in this application, all necessary commands can be given to the virtual machine created and the code pieces written can be run. Finally, Jupyter Notebook is used to convey the tutorial document prepared by our experienced instructors to the user. In this way, the user will be able to perform the tutorial in the document and observe the results.

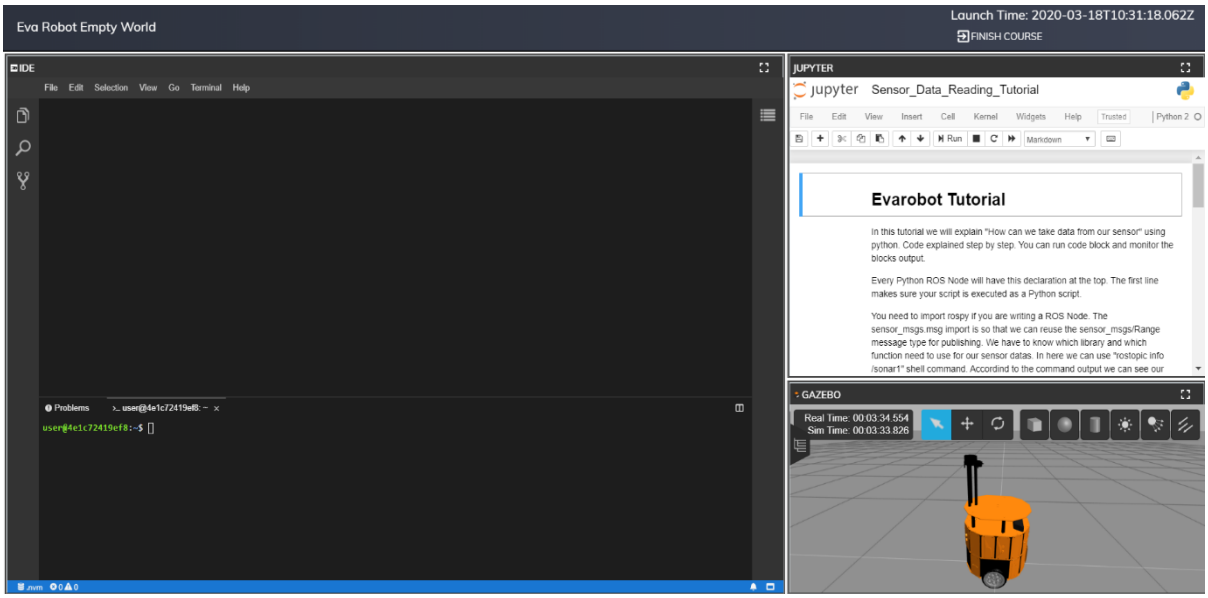

Figure 1. User's Course Page View