

Task 4:

Currently, VALHALLA provides only the time to follow an instruction and the instruction itself. In the case of a Blind or Visually Impaired Person (BVIP), these instructions need to be improved to support navigation of a BVIP. A BVIP always needs feedback from the system regarding what needs to be done to ensure more safety during navigation. The system can trigger three types of commands: "Go left," "Go right," and "Stay center." You need to develop a method that transforms the instructions, time, and GPS information to generate a list of commands ("Go left," "Go right," "Stay center") that describe the route. These commands should be displayed with the time (when to trigger at least every 3 seconds) and the corresponding command from the list.

Please do not hardcode the commands into the list because we have noticed that some groups hardcode the route into the code. We aim to integrate your code into the SENSATION system and are unhappy when your code works only in specific cases and not in general. We have determined that you have not fully explored the possibilities in VALHALLA. In VALHALLA, it is possible to obtain different types of route information. Currently, most of you are only using the route function of VALHALLA. For example, you can also use the trace endpoint of VALHALLA, where you can perform map matching. Please take a look here: [VALHALLA Map Matching API Reference](#)

This will provide you with more detailed path information. To do this, you can use some GPS locations from your GPS tracking. We encourage you to explore different endpoints from VALHALLA. Create a directory called "myroutes" in your branch and develop three scripts that fetch path information from VALHALLA using these endpoints and store them in this folder. Check this documentation for the endpoints: [VALHALLA API Documentation](#). For example, for a matrix result, see: [VALHALLA Matrix API Reference](#)

Please deliver your complete work (Command transformation and 3 scripts for path information) by Thursday (30.11.2023) between 18:00 and 20:00 in your group's branch. Good luck.