Week 5 Report - Dec 19, 2022 ~ Dec 25, 2022

🎄 Merry Christmas!

I hope you are all having a great holiday during the Christmas break! I am spending Christmas with my girlfriend's family in Geneva. Although Florian told me I don't have to have an update/progress during the break, it doesn't hurt to wish you all a merry Christmas, right? 😉

📚 More Literature Reviews

Whilst diving deeper into the NPFG from TJ throughout the whole thesis period/last week, I questioned myself whether I am narrowing down the scope too much from the beginning, and whether I should also read general Path Following guidance review papers with various techniques of PF (Path-Following), so that I don't just think about the specific implementation of NPFG.

And as expected, there's a whole lot of things happening in the PF research field, and **NPFG** (usually referred to as: Non-Linear-Guidance-Law, **NLGL**) is just a specific type of PF that is being studied.

As I added in the literature survey document, I came across a recently-published (2022) paper "A review of path following control strategies for autonomous robotic vehicles: theory, simulations, and experiments", which attempted to unify the problem formation of multiple PF algorithms in literature, by defining the frames / methodologies in a single framework.

Since my thesis aims to unify the PF algorithm, I think it is worthwhile to utilize their publication/open-source tools (Gazebo Simulation). Because they have already put quite a lot of effort in unifying the formulation, which is a good step in unifying the algorithm for multiple categories of vehicles.

END