Report No: 1 Team: ND RTS Date: 16.12.2024





1 Introduction

From opponents to best friends: this chapter is called "Getting to know each other better". In past local contests we usually were smaller groups every time showing greater and greater potential in trying to out best the others, now we'll be working together for the greater good

2 Planned activities

- Adelin is the interface manager, his strong suit is graphic, but not the bad kind, graphic interfaces that is, so he'll be the one designing a great dashboard inspired by this year's amazing provided one, with many of the car kit's inspired design, slavic people love them, and we love it too, the bmw shell will be his muse and will provide him with many ideas to make it a mix of fun and usefulness, add to that that he's ready to start working on the hardware interfaces too
- Dănuț is a creative and great manipulator of the python, he studies hard, works hard, and plays hard, all of that getting him up to the top in finding ways to pass trying times when the code is trying to try us
- Denis as much of a free spirit as he is, he took the role of the team leader, he'll be leading the team to higher grounds that it could've ever reached without his well thought out guiding words, oh, and he's an incredible mix of software and hardware mastermind, he's already got the party started during the summer while working on his own, on self driving A.I. powered cars, spoiler, he's planning for a hivemind driven self driving cars for his final uni project, which really drives him to put as many hours into this project
- Nicolae as they say. . . acting captain, having lots of experience with managing teams, projects and the good progress of things, he's here to do all sorts of things on a range starting from advising to counselling, to working by himself and team up with each to finish up all the many tasks to come up on our list, he is eager to put up his experience of working with AIs, SBCs, and design into providing a unified workflow for all to use and accelerate the achievements we all want to see in this team
- Radu is the white hat hacker that is always up to finding ways to hack around solutions, he's got an outstanding expertise in software development, reverse engineering and hacking, he's claimed his spot in the team for being so unexpectedly full of good surprizes, as low key as he'd like to be, he's always in front of the others without making it obvious, he's ready for action, and he's always got a plan before most even got an idea of where to start from, he plans to be the software mastermind of the team and we believe it too

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3 Status of planned activities

We were very surprized to get the car kit minutes before the kick-off's start time, as we were presented with the basics, we were delighted by the sweet car kit, and the sweets of course, thank you for those. We started looking through the code and have ran the simulator right after we were accepted, and got the A.I. trained to detect traffic signs and *almost* keep lanes.

We have tested a few materials to see which one would perform the best, and have the least amount of reflections and unwanted textures, we are now looking into trying a few more that are on the way to verify that we give the robot the best chances at driving itself in the physical environment.

4 General status of the project

As previously stated, the traffic sign recognition is almost close to perfection, we just have to apply some better noise reduction algorithms to have it where we want it to be

The lane keeping is still a work in progress, we managed to have the robot recognize the lanes, but due to a bug, it sometimes refuses to work altogether. We'll have to redo and rebuild it by the looks of it

5 Upcoming activities

We consider that we haven't put as much work as we would've liked so far, but we all managed to free up as much of the following weeks and plan to get more done in the winter break, on our to do list among the lane keep we have added "defining path planning and validation", "lane following and speed control", "robot can keep a lane and make curves" and "robot cand navigate intersections"