

Perception & Sensing WG Meeting

31/05/2023 #3533

drwnz started this conversation in **Working group meetings**



drwnz on May 30, 2023

Collaborator

edited by xmfcx

Administrative

- [Previous meeting](#)
- **Meeting time:** Every second Wednesday, 10am UTC (alternating with Mapping WG)
- [WG Google Drive](#)

Attendees

▼ Chaired by Fatih

- Kenzo Lobos
- Dai Nguyen
- YoshiRi
- Zeynep Akbalik
- Prerag Djurdjevic
- Alexey Panferov
- Mitsudome-san
- Yusuke Muramatsu
- Kaan Çolak
- Holger Trittenbach
- Armağan Arslan
- Miura-san
- David Walmroth
- Kumar, Chamakuri Sai
- Bonolo
- Phan Nam

Agenda

- Introduction of new attendees
- Introduction from [neurocat](#)
- Progress report on **Completion of Sensing & Perception Documentation**
- Progress report on **Universal Lidar Driver**
- Review of [Project Board](#) and assignment

Category



Working group meetings

Labels

meeting:sensing-p...

2 participants



Discussion topics

- Introduction from [neurocat](#)
 - They offer the product: [aidkit](#) as a solution:
 - aidkit is the toolkit to test the perception functions of ADAS/ADS and ensure they are safe for deployment.
 - By testing your ML model for robustness against a range of altered scenes, aidkit ensures reliable performance in your ODD.
 - Where performance falters, aidkit guides your data campaign so you know how to improve.
 - aidkit integrates into existing workflows and reduces time to deployment though useful features such as scaling, data lineage, and automatic retraining.
 - Deploy a safer perception component with the empirical evidence to back up your safety claims to safety managers and external regulators.
 - How to collaborate with neurocat 🐱 ?
 - Let's hold another meeting to discuss further.
 - We'll compile a list of our questions for neurocat.
 - Progress report on Supported Sensors Documentation
 - [@armaganarsln](#)
 - In the reference wg, we are also interested in this.
 - [@xmfcx](#) to join to the next Reference WG to show them how they can contribute it to the documentation
 - https://docs.google.com/document/d/1Q2hRkJ1y_smtogIYb0sQdOyot-01UpZV3DIgYGU1-Gs/edit?usp=sharing (old documentation)
 - Progress report on Completion of Sensing & Perception Documentation
 - [docs: add perception design](#) autoware-documentation#385
 - Everyone is ok to add comments even in the draft stage.
 - [docs\(design/autoware-interfaces\): add sensing interface](#) autoware-documentation#328
- ```
/sensing/lidar/driver/velodyne_driver
/sensing/gnss/preprocessor/gnss_poser
```
- We can discuss more on the convention.
- Progress report on Universal LiDAR Driver
  - Will be released within this week.
  - Thank you for discussion on point field ordering, implementation has been aligned to match:

```
struct PointXYZIRCAEDT
{
 float x;
 float y;
 float z;
 std::uint8_t intensity;
 std::uint8_t return_type;
 std::uint16_t channel;
 float azimuth;
```

```
float elevation;
float distance;
std::uint32_t time_stamp;
};
```

- Review of Project Board and task assignment
  - Ground remover package
    - [👉 ground remover package cannot delete ghost points appears front of car when passing speedbump](#) [autoware.universe#3673](#)
  - Caching issue
    - [👉 ring\\_outlier\\_filter blows up my cache \(and yours too\)](#) [autoware.universe#3269](#)
  - Map-based prediction
    - [👉 Map Based Prediction Incorrect Predictions](#) [autoware.universe#494](#)
- Other items
- [@badai-nguyen](#) is working on rainy conditions object detection tasks internally.
- [@knzo25](#) is working on Traffic light arbiter node.
- [@miursh](#) mainly reviewing the active PRs and issues.
- [@YoshiRi](#) internally working on: tracking models, tuning tracking (camera filter params)
  - We don't have enough regression checks in general, we can not easily confirm if parameter changes improve the tracking stack.
  - In TIER IV collecting annotated data, simulator, planning to use these data to eval perception results.
  - Working on the Web.auto service, not github ci.
- [@yukke42](#) working on ML projects, not public yet.
- [@Zeysthingz](#) working on
  - [👉 ground remover package cannot delete ghost points appears front of car when passing speedbump](#) [autoware.universe#3673](#)
  - will upload data on the topic
- [@kaancolak](#) is working on sensing delay mitigation on the Internal VW Golf vehicle project.
- [@lexavtanke](#) is working on ML based Occupancy
  - [👉 ground remover package cannot delete ghost points appears front of car when passing speedbump](#) [autoware.universe#3673](#)

## Action items

- ☐ Announce formation of working group on ROS Discourse
- ☐ Announce Nebula (universal sensor driver) open source release
- ☐ Summarize current documentation for Sensing & Perception documentation

↑ 0



**lexavtanke** on May 31, 2023

Collaborator

[Progress report](#) on ML occupancy prediction task

↑ 1

0 replies