*Seventh Meeting Note*

1. *Attendance list (who attended, and who did not, and for what reason?)*

*Oluwatimilehin Tijani, Qianyu Hu, Kexin Zhang, Weitao Deng, Yutong Cui,*

*Dongjian Ma, Mengting Wang, Botong Wen,*

1. *Date, time and place for the meeting*

*Thursday 16:00-17:00, January 23, 2025, Office Meeting*

1. *Report on the preparations (what issues, questions and challenges were brought up?)*

*(1). Control:* *Reported on the complement of initialization and calculation components of the PID algorithm.*

*(2). Transformation: Discuss the process of setup Moveit! and KDL-based IK calculation and static transformation broadcasting method and present the experimental results.*

*(3). Detection:* *Reported on creating dataset and label data.*

*(4). Motion Planning: Presented the GA-based grasping sequence optimization algorithm and implementation of MoveIt! and motion planning using MoveIt!, path planning execution, and comparisons between different planning algorithms, analyzing their success and failure cases.*

1. *Advice that you received*
2. *Focus on methods of adjusting the PID parameter.*
3. *Transformation module should assist other modules.*
4. *Expand the scale of the object detection dataset for better training results.*
5. *Integrate the GA in the motion planning module for practical grasping.*
6. *Decisions that were made*
7. *Increasing coordination between different modules*

*(2) Focus on using the YOLO algorithm for object detection training and expand dataset.*

*(3) Adjust the Moveit algorithm and parameters to resolve path planning failures and optimize the scoring algorithm.*

1. *Actions that were agreed on*

*Modify the existing research plan based on recommendations and enhance collaboration and coordination.*