ICCV SLAM Challenge Report Template

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Abstract— **A template guide for ICCV 2023 SLAM Challenge report. Please try and respond to all the questions we posted. If you submit the xxx.zip trajectory results to gradescope, please also add this report to the zip file. Remember to add your contact information in the report.**

I. INTRODUCTION

In this section, please provide a brief introduction to your methods. Kindly include (but not limited to) the following information:

- Which track are you participating in?
- Which sensor modalities are you employing? (e.g., IMU, or mono cameras, LIDAR data?)
- Are you using a learning-based or non-learning approach?

II. METHOD DESCRIPTION

Please provide a brief overview of your approach, addressing the following (but not restricted to) points:

- Methodology Diagram: Elaborate on your methods, particularly delineating the frontend and backend components.
- Nature of the Approach: Does this method incorporate a filter-based, optimization-based paradigm? or using any other approaches?
- Online/Offline: Is the proposed method tested in online or offline?

Furthermore, it would be beneficial to illustrated following topics:

- Strategies for Robustness: Which key techniques did you implement to enhance the system's robustness?
- Training Process: If using learning based method, please provide specific details for your network design.
- Map Representation: What is the map representation in your algorithm?

III. EXPERIMENT RESULTS

Provide the following information regarding your methodology and computation, addressing the following (but not limited to) points:

- Please make a ATE and RPE table according to the gradescope results to evaluate accuracy.
- Processing Time: provide the detail of runtime performance for each sequence.

- Hardware & Usage: Offer information on CPU and GPU usage, as well as any particular hardware settings or configurations employed.
- Parameters & Consistency: Provide the set of parameters and indicate whether a consistent set of parameters was used across various sequences or if there were variations.
- For sensor fusion track submissions, specify if a manual alignment was conducted for maps or trajectories.

IV. SUMMARY & DISCUSSION

In your summary, you may address the following (but not restricted to) points:

- What is the major problem you are solving during the competition?
- Is there any engineering details you make the algorithm successful?

Additionally, please touch on the following points:

- Open Source Consideration: Clarify if any segment of your approach is open source or derived from open-source initiatives. Please add the link for references
- Collaborations and Acknowledgments: Enumerate any collaborations or recognition you'd like to highlight.

APPENDIX

Appendixes should appear before references. Incorporate any supplementary information, references, or additional materials in this section. Limit the appendix to half a page.

REFERENCES

References are important to the reader; therefore, each citation must be complete and correct.

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