

Goal



Jetyak

Correcting range sensor data

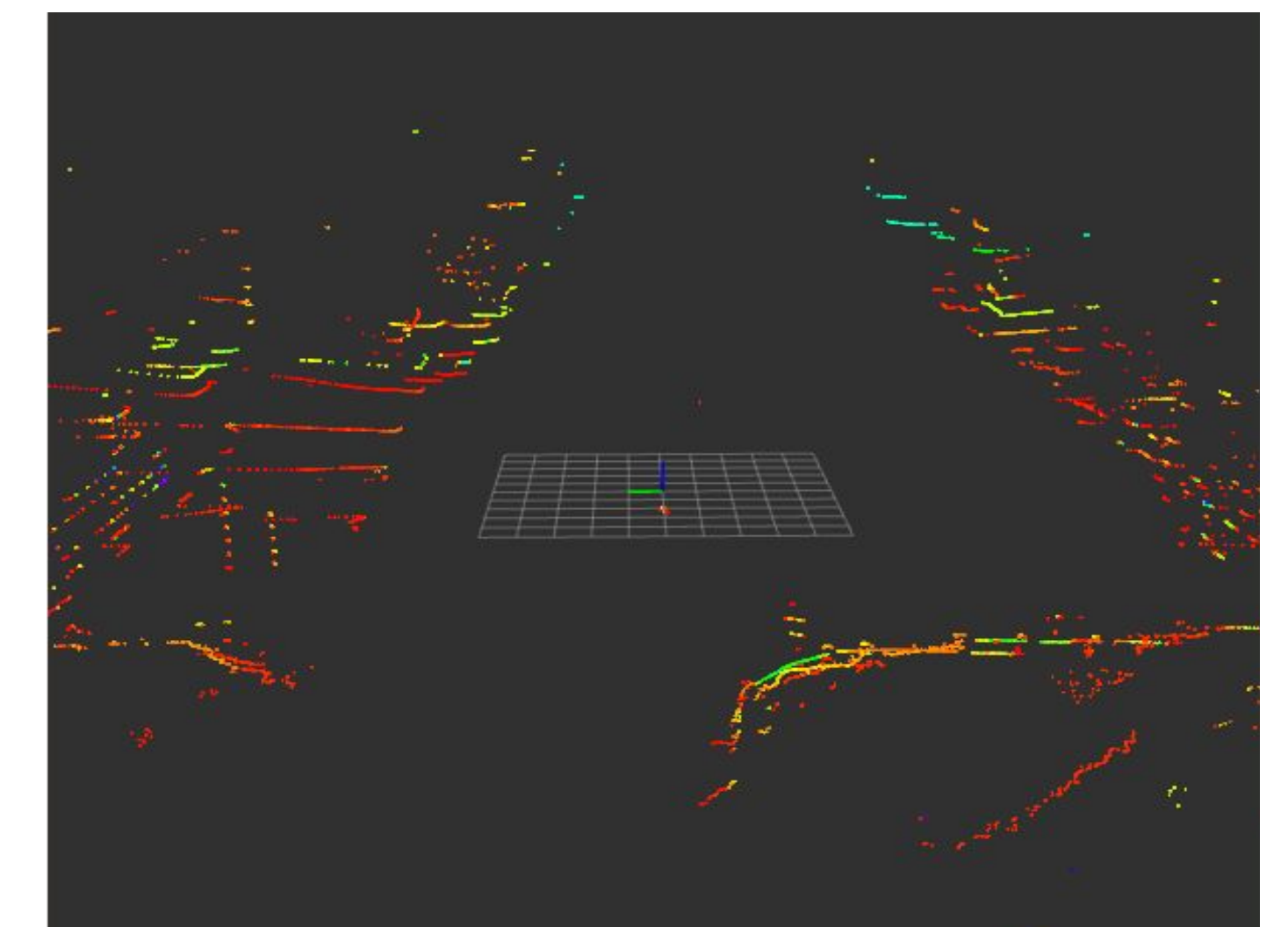
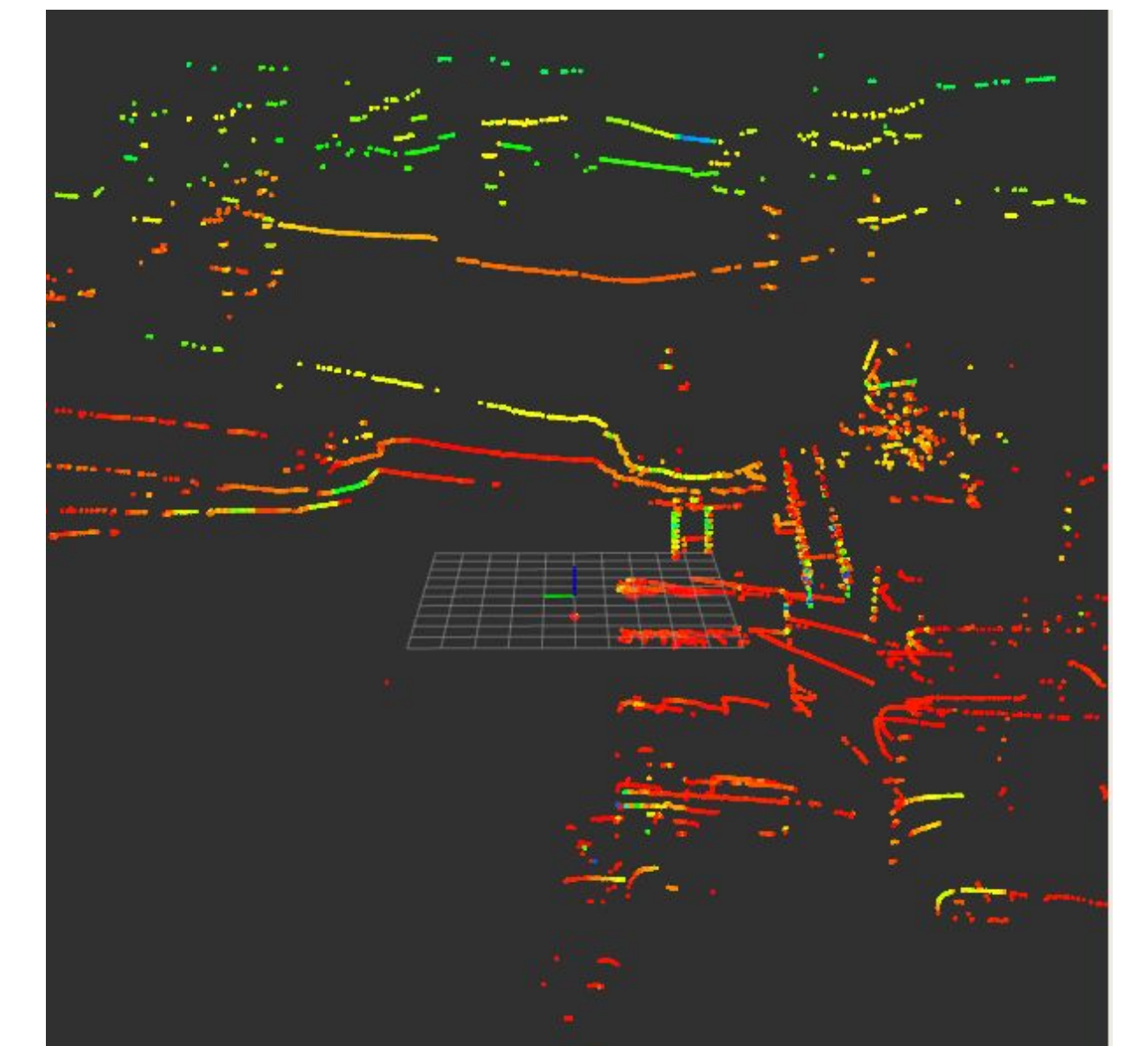
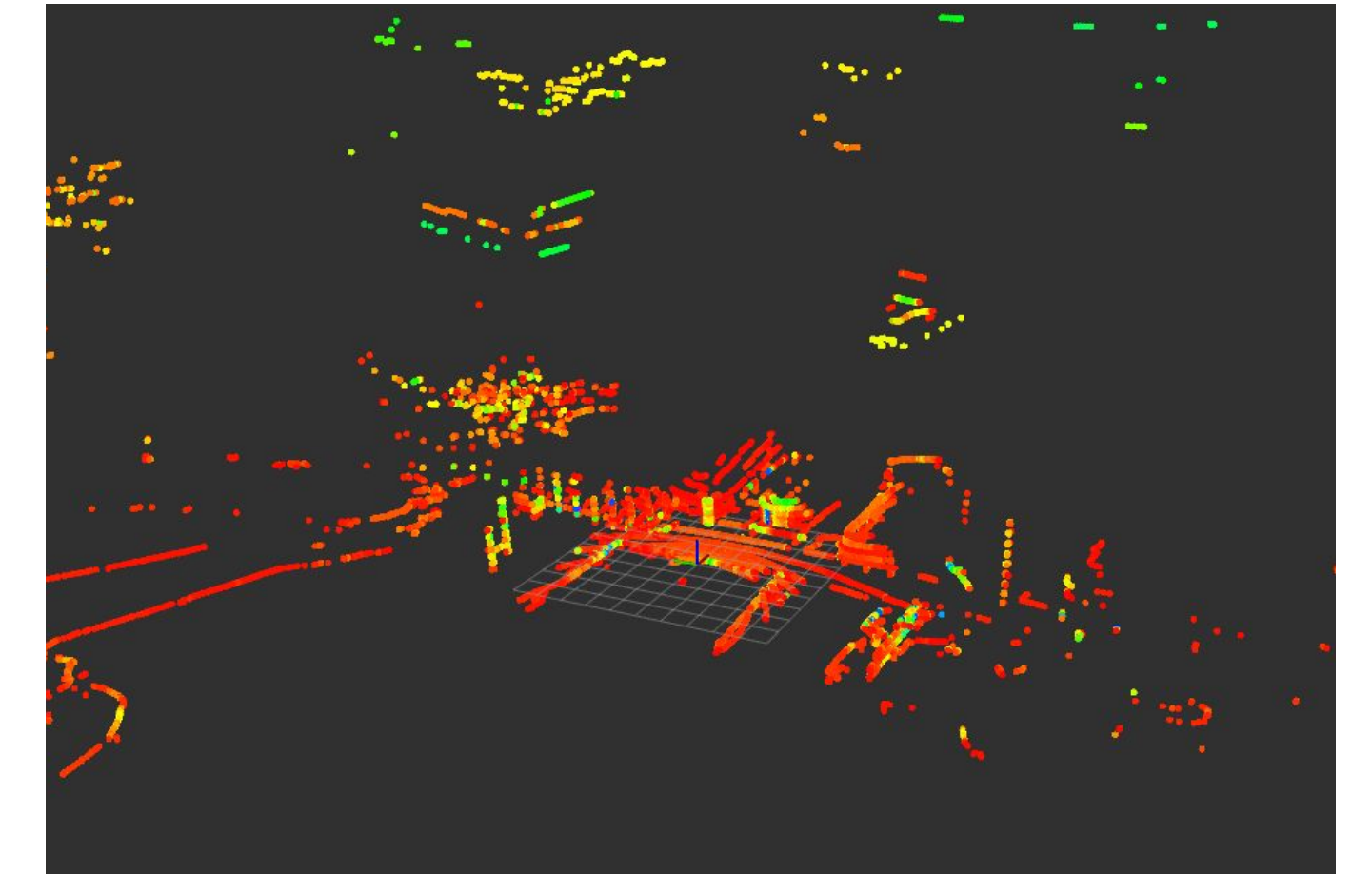
Motivation



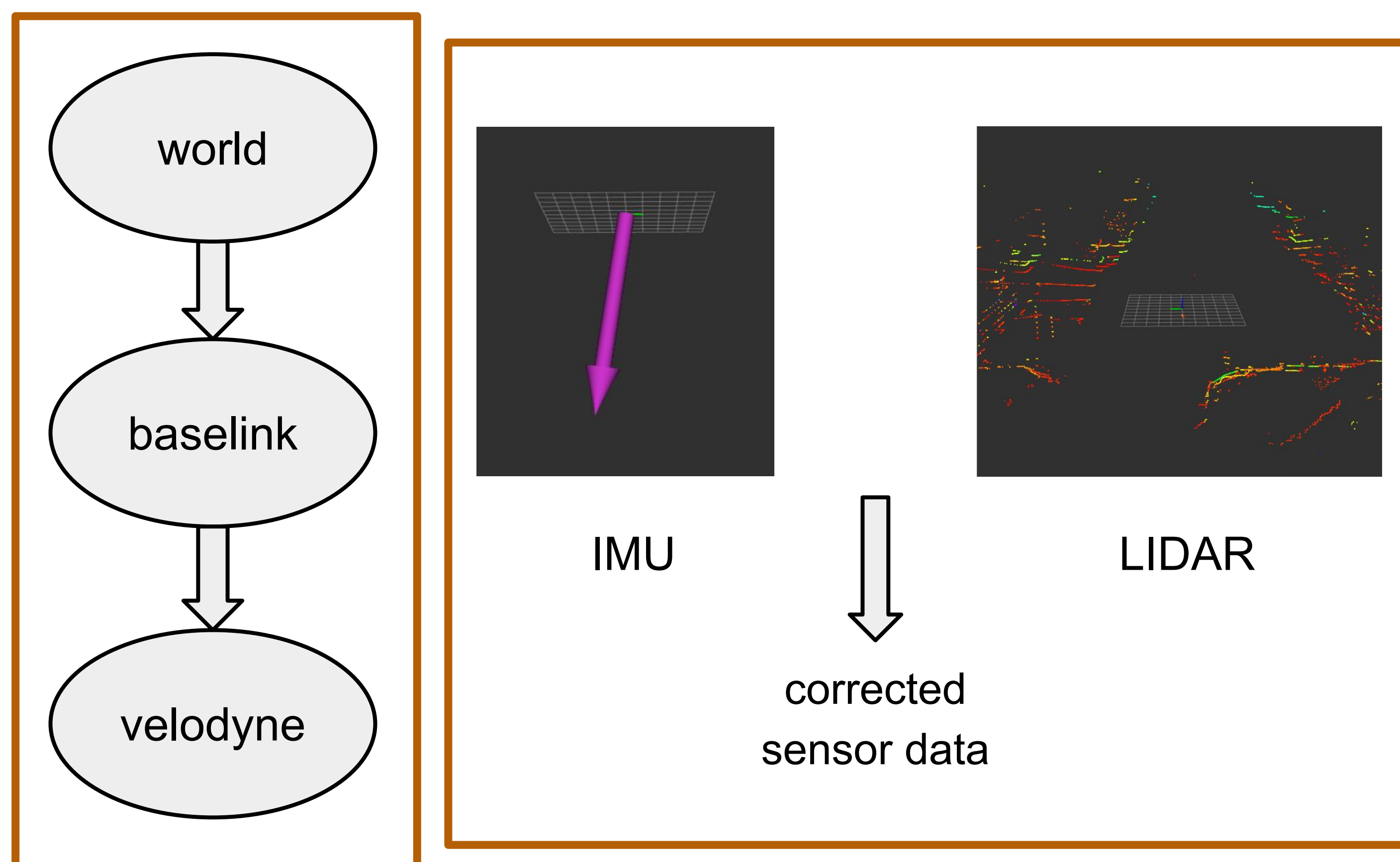
Integrating data correctly



Results



Proposed Method



- USV aligned with surface -> correct orientation
- Misaligned USV -> incorrect output
- Cause of misalignment -> waves

Conclusion

- Imu-based correction of sensor data was proposed to accurately display a map of its surroundings/environment
- Future work
 - test in different/challenging environments in real time to test accuracy

References

- [1] Ibrahim J. Salman, Justin A. Baum, Hunter J. Damron, Joshua Y. Nelson, Andrew K. Smith, Marios Xanthidis, Joshua Cooper, Ioannis Rekleitis, "Radar based navigation for Autonomous Surface Vehicles" in IEEE ICRA 2021

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