

## Perception and Application of AI Ethics in Different Research Sectors: Autonomous Driving, Earth Observation, and Social Robotics

### Background

The ethics of artificial intelligence and the interest around it is growing, but to expect all AI creating stakeholders to comply with such expectations, researchers have to first understand their meaning, and how to implement them practically. The presented proposal touches three (3) sectors of interest: (1) Autonomous Driving, (2) Earth Observation, and (3) Social Robotics. Each have a different representation in society, which makes populations more or less aware of the risks and opportunities attached to the individual fields.

### Expected goals

Drawing upon scientific and journalistic literature, the studies proposed here aim at understanding how each field's researchers perceive AI ethics, and implement it or not within their research scope. Additionally, for master students, an interview design will allow to understand experts' opinions on the topic. The population to interview will be researchers from public academic and research institutions working in the field chosen as a focus by the student.

### Research Questions

- How is AI Ethics understood and implemented by AI researchers in specific fields?
- What are the main issues and concerns encountered by researchers impeding implementation of ethical principles in their work?
- How could AI Ethics be made more intelligible and applicable for such researchers?

### Recommended literature

Floridi, L., Cows, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., ... & Vayena, E. (2018). AI4People—an ethical framework for a good AI society: opportunities, risks, principles, and recommendations. *Minds and Machines*, 28(4), 689-707.

Zhang, B., Anderljung, M., Kahn, L., Dreksler, N., Horowitz, M. C., & Dafoe, A. (2021). Ethics and governance of artificial intelligence: Evidence from a survey of machine learning researchers. *Journal of Artificial Intelligence Research*, 71, 591-666.

Gunkel, D. J. (2020). Mind the gap: responsible robotics and the problem of responsibility. *Ethics and Information Technology*, 22(4), 307-320.

### Details

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### Contact

If you are interested, please contact Auxane Boch ([auxane.boch@tum.de](mailto:auxane.boch@tum.de)).  
We are looking forward to your application!