

Title: Child Seat Localization**Goal**

Build AI solution for child seat localization in the passenger vehicle.

Problem statement

Localization of the child seat in the passenger vehicle enable the business to high-level services and use cases.

**Data set**

The data set shall be <https://sviro.kl.dfki.de/> or any appropriate data set.

Solution scope

Proposed software solution shall / may.

- Instrument the data set.
- State or use prior work from academic / industry.
- Use appropriate state of the art AI algorithm (preferably deep learning based).
- Enhance the data with synthetic data.
- Reasonable accuracy on the given scope of time to develop.
- The test set should not include vehicles from the training set, to evaluate model generalization.
- Rationales for the current Approach to enhance.
- Use any appropriate open-source libraries and framework, respecting copy rights and giving credit to the authors.
- Focus more on the algorithm than the overall application.

Bonus Challenge (optional)

Extend the current dataset with synthetic data inserting smoke inside the vehicle and implement an AI smoke detection system.

Delivery

The solution shall be presented GitHub / GitLab code with optional supported document in email.