



About this project

Strukton Rail and the [Ambient Intelligence](#) group at the Saxion university of applied sciences are jointly investigating how the design process for railway tracks can be supported via a reality model/digital twin technology. The reality model concept is a virtual, preferably real-time presentation of a physical scenario.

Team

Project manager: Jeroen Linssen

Researchers: Bram Ton (PhD candidate), Faizan Ahmed, Annemarie Jutte, Danny Plass, Deepak Tunuguntla , Kevin Wilmink

Students: Jonas Henstschel, Maksym Drhval, Thinh Cao, Jean Louis Clemente, Floris Verburg, Ole Salet, Artur Dylewski, Jakub Kosciolek, Arda Akyazi, Plamen Bozov, Anthony Anazo, Daniel Actor, Reinier Algra, Joris Jonkers, Jasper van der Werf, Nils Rutgers, Bram Dekker, Jesse Snoijer and many more.

Output

In our attempt towards realising this reality model, below is an overview of the project output.

Publications and literature review

- [Publications List](#)
- [Literature review](#)
- [Awesome railway datasets](#) publicly available

Codebases

Semantic segmentation in point clouds

Name	Github Repo	Publication
Jonas Henstschel	Link to repo	Report
Floris Verburg	---	Report
Plamen Bozov	---	Report

Name	Github Repo	Publication
Jasper van der Werf	Link to repo	Report
Bram Dekker	Link to repo	Report

Object detection in point clouds

Name	Github Repo	Publication
Bram Ton	Link to repo	See the publications list
Maksym Drhval	Link to repo	Report(internal access only)
Ole Salet	Link to repo	Report
Anthony Anazo, Daniel Actor, Reinier Algra, Joris Jonkers	---	Report
Nils Rutgers	---	Report
Jesse Snoijer	Link to repo	Report

Object detection in images

Name	Github Repo	Publication
Annemarie Jutte	Link to repo	---
Thinh Cao	Link to repo	---
Artur Dylewski, Jakub Kosciolek, Arda Akyazi	dataset	Report

AR/VR visualisation

Name	Github Repo	Publication
Niek	Link to repo	Report(internal access only)
Kevin	Link to repo	---

Model deployment

Name	Github Repo	Publication
Pascal and Claudien	Link to repo	---
Tim Uilkema	---	Report

Note: Currently, the above listed github repos are private. However, access could be requested on sending your request to Jeroen Linssen (j.m.linssen@saxion.nl)