



VOLVO PENTA

Development of a Scale Model Autonomous Forklift based on an Open Source Software Framework

Thesis Background

Automation can replace hard, monotonous work in a challenging or hazardous environment while increasing productivity or quality. Unmanned vehicles in confined areas use sensors & AI to observe the environment without any driver; potentially lowering costs and improving safety. In this thesis a scale model of an autonomous forklift will be developed. The basis of the automation package will be an open source software. OpenDLV is an open software framework intended to run in autonomous self-driving vehicles and it is vehicle type independent.

Thesis scope of work

- Build a scale model platform based on a base platform that was previously developed for a different application. 3D printers are available for this project.
- Modify the open source automation platform (OpenDLV) for the specified application, in collaboration with Chalmers Revere Lab
- Test and verify it in a physical field
- Demo of the system

Qualifications & Required Documents

- Two students with a background in mechatronics, signal and systems, automotive engineering or similar
- Knowledge of automation, optimization and verification
- Programming, Matlab, Simulink

Please send your application including CV, Cover Letter, and Transcript of grades.

Practical information

Thesis Level: Master (30 ECTS points)

Language: English

Starting date: January 2019

Number of students: 2 students

Last application date: December 1st, 2018

Examiner proposal:

Contact

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About us

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In new Technology Development, our mission is to develop and deliver new innovative solutions and driving Volvo Penta transformation towards future technology. We are a light setup with few own resources, but with a budget and mandate over a large number of appointed resources. We are an agile and scalable entity that adapt over time to reflect the changing needs. We deliver Technology strategy, Innovation and Mature technology ready for product projects.

Entity: AB Volvo Penta

State / Province: Västra Götaland

City/Town: Göteborg

Employment/Assignment Type: Thesis

Functional Area: Technology

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