

Application for Thesis Contract – Department of Electronic Systems

Type of thesis: Master's Thesis

Student

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Programme: Computer Engineering, Networks and Distributed Systems

Project Supervisor(s)

Name: Jimmy Jessen Nielsen

Signature:



Collaboration with a Company (YES or NO): Yes

Thesis

Project Title: Automated IoT Management for Vehicle-to-Cloud Systems

Starting: February 3, 2025

Deadline: June 4, 2025

ECTS: 30

If long master's thesis please indicate courses:

Project Description:

This project builds on the 9th-semester internship with AutoPi, an external organization specializing in IoT devices for collecting data from various types of vehicles and machinery. These devices operate under diverse constraints, often leading to performance challenges. They interact with multiple network entities and frequently require manual intervention by engineers to fine-tune their operation for specific use cases. The objective is to automate these configurations, enhancing performance while reducing the engineers' workload.

Plan for Thesis Supervision and Lab Work:

Date	Activities
February 3 - 7	Project proposal
February 10 - 14	Project planning, thesis contract submission (Supervisor meeting)
February 17 - 21	Lab set up (OBD emulator, IoT device selection)
February 24 - 28	Report 1 st draft: framework for tests, key performance terms
March	
March 3 - 7	Supervisor meeting
March 10 - 14	Lab tests, state of the art, methods



March 17 - 24	Report 2 nd draft
March 24 - 28	Supervisor meeting
April	
April 1 - 4	Report corrections
April 7 - 11	Lab tests, results section
April 14 - 18	Lab tests
April 21 - 25	Report 3 rd draft: methods and preliminary results
April 28 - 30	Lab tests
May / June	
May 1 - 9	Supervisor meeting
May 12 - 16	Report preliminary submission
May 19 - 23	Lab tests
May 26 - 30	Report work
June 2 - 4	Final report submission

Approved by Head of Studies:

Date:

28/2-2025

Signature:

Please return the signed contract to the study board for approval by e-mail: inst.es.sdnvn.eit@es.aau.dk