

# WILLIAM HELLINGWERF

## RESUMÉ

### SCANIA, FRAMTIDEN&SCANIA CV – APR 2021 - CURRENT



Design engineer at battery pack development for busses and trucks. With focus on designing casted aluminium housings and stamped sheet metal parts for the BMS and charging components. Developing and planning new protocols methods for "free fall" drops of complete battery packs with regards to international safety standards, as well as planning and performing the tests.

### MASTER THESIS PROJECT, NORTHVOLT – SEP 2020 - FEB 2021

northvolt

Continuing on the path set by my work of developing EV battery packs at Lund Formula Student, I'm currently writing my thesis at northvolt as part of the mechanical engineering team - battery systems. In this project, I'm evaluating the type of welding method to be used for the assembly of a battery module. This work includes work such as weld FEA, thermal development simulations in the welding process, weld strength calculations to Eurocode 9 standard as well as developing and manufacturing a test rig.

### ENGINEERING INTERN, KOENIGSEGG AUTOMOTIVE AB – JUN 2019 - AUG 2019



I spent a summer and a few months on the development of a motorised arm (to carry approx. 200 kg) to be used in manufacturing. My task; do whatever it takes to have a working prototype at the end of the internship. The performed work included design, rapid prototyping, manual machining, programming, wire-harnesses, choice of actuators and power supply. The goal was achieved within the last weeks of the summer internship. The working prototype is used in manufacturing.

### HV ACCUMULATOR ENGINEER & ESO, LUND FORMULA STUDENT – JAN 2019 - AUG 2020



Design, manufacturing and assembly of the battery pack / accumulator for the first fully electric Lund Formula Student car. I also had the role as ESO, *Electrical Safety Officer*, to determine whether the car and high voltage systems were safe to work on. High voltage training certificate EN 50 110-01 acquired during this time. The design work was carried out to international standards such as Eurocode for fastening, and UL 94 for flame retardant material choice in the design process. I was also responsible for our in-house 3D printers. Logging machine hours, maintenance etc, and held a lecture on how to design for 3D printing for the team. Manufacturing methods for the battery pack included: Laser cutting, Water jet cutting, 3D printing, CNC milling, welding etc.

### VEHICLE DYNAMICS, LUND FORMULA STUDENT – SEP 2016 - AUG 2017



Working in a team of four people in the Vehicle Dynamics and Unsprung Mass at the Lund Formula Student team. My focus: designing an anti-roll system and calculating and adjusting spring and damping rates for the suspension. During the manufacturing phase I was partly in charge of our in-house Lathe and Mill, where I also manufactured many parts.

### MARKETING MANAGER, LUND FORMULA STUDENT – SEP 2015 - AUG 2016



At the first year of my education I was responsible for the marketing, logistics and sponsorships at the Lund Formula Student team, where I had two assistant managers at hand. In the manufacturing period, I had the manufacturing responsibility for our in-house Lathe and Mill, where I manufactured countless parts.

## EDUCATION

### MASTER IN MECHANICAL ENGINEERING WITH INDUSTRIAL DESIGN

LUND UNIVERSITY, LTH. 2015-2021

### INTEGRATED PRODUCT DESIGN

TU-DELFT, ERASMUS SEMESTER 2018

## SKILLS

**CAD: Skilled in:** Catia v5, Solidworks. **Experience with** Creo-parametric, Siemens NX, , **FEA** Ansys.

**Programming: Experience with:** Java, C, Matlab.

**Other skills:** Design for 3D printing, Design for manufacturing, HV-training.

**Languages** - Fluent in Swedish, English. Proficiency in Dutch.

## REFERENCES AVAILABLE UPON REQUEST

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