Leon Santen

Engineering Student: Robotics and Sustainable Design

I am an engineering student seeking challenging opportunity in Robotics or Sustainability. I want to use my engineering skills to contribute to a sustainable way of engineering and think critically about my work's impact. I am currently doing research with Ph.D.Benjamin Linder in *Sustainable Design* at Olin College of Engineering that offers a practical hands-on and team-focused education.

Experience

2018-07 - 2018-08

Research Assistant - Technical University Munich - Prof. Dr. Lienkamp - Automotive Technology

TUM - Department of Mechanical Engineering

- **Co-Author - Publication -** *"Should we allow him to pass?" Increasing cooperation between truck drivers using anthropomorphism*
- Coordination, planning, execution of study - including coordination of sub-teams, state machine programming (ruby), CAN bus integration, study design
- Leadership of construction of modular dynamic driving simulator - CAD, buildup, sub-team and shop coordination

2018-01 - present

Research Assistant of Ph.D. Benjamin Linder

Sustainable Design - Behavior Research

- IRB-certified Study execution (90 participants in three groups) - we are testing the effect of physical counters on participants laundry behavior
- We are particularly talking about 20/80 products that have a huge impact due to their usage and a low impact due to their production

2018-08 - present

Printed Circuit Board (PCB) Design

Electric Car (Formula- Style) - Olin Formula [link]

- PCB-Design in KiCAD - working on state of charge (SOC) interface
- Team of 45 undergrad Olin-students - electrical and mechanical engineering

2017-08

Suspension Design - Off-Road Vehicle

Off-Road Vehicle Design - Baja

- Member of 25 person team preparing to compete in off-road vehicle competition
- Goals are: Building a completely new car, optimizing its weight, designing better structural components
- I designed upper and lower suspension A-arms - ensured no interference with shock absorber
- I designed fiberglass composite construction for the seat
- FEA analysis and technical drawings

2017-01 - 2017-05

Intern

SCHÜTZ GmbH & Co. KGaA, Germany

- Engineering intern going through all manufacturing processes of IBC-containers at medium-sized company
- Injection molding, CNC milling/lathing, machine construction, CAD, extrusion molding, welding

Lesson learned: Engineers must be in touch with the manufacturing process for the pipeline between design and deployment to be smooth

Personal Info

Address

1000 Olin Way

Needham MA 02492

USA

Phone

+1 (781)535-4848

E-mail

leon.santen@students.olin.edu

Date of birth

1997-08-05

LinkedIn

www.linkedin.com/in/leonsanten

Skills

SolidWorks (FEA), Fusion360, CATIA

MATLAB

KiCAD

Python, C++, C

Composite bay - carbon fiber, fiberglass, Kevlar

Welding

CNC Milling, CNC Lathing

3D-Printing

English

German

Education

2017-08 - 2021-05

Olin College of Engineering, B.S. Engineering: Robotics

#1 or #2 MIT-study most innovative engineering institution worldwide [link]

Recipient of 4-year, 50% Olin Merit Scholarship

2009-08 - 2016-05

Lessing-Gymnasium, Frankfurt am Main, German High School Diploma (among five best students)

German Physics Society Award for outstanding students

AP Physics - 15 out of 15 points

AP Mathematics - 15 out of 15 points