

# Finding the Convex Hull with Application to Distance Measurements for a Formula Student Car

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## 1 Introduction

Hi My name is Benedikt Schlereth and I'm studying Applied Math and Physics in the sixth Bachelorsemester. Right now I'm working for the Fraunhofer-Institut IIS here in Nuremberg, where we want to find the best feature-extractions tools to detect certain behaviors. To learn the practical implementation of new technology I support our local Formula-Student-Team Strohm und Soehne by designing PCB-Boards for the Electric car. In the future I also want to contribute helping out in ours Software department.

## 2 motivation

First let me explain what Formula Student is: Formula-Student is an international design and construction competition where teams from all around the world are constructing and then racing single seat formula race-cars. With the new event of Formula-Student-Driver-less Teams are encouraged to develop their own self-Driving cars. My motivation is to kickoff the development of our own Driver-less Vehicle by implementing the first step and providing a way to detect the boundaries of the track.

## 3 publication