# A Model-based approach for testing intelligent transportation applications

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***Abstract*— Please write some abstract here.**

## I. Introduction

This is your introduction

## II. Background

Some background

## III. Model-Based Design

The vehicle model design is split into two parts: i) vehicle body or frame, and ii) chassis. We will discuss our approach for designing a realistic model to imitate a realistic scenario.

### A. Designing Robots with ROS

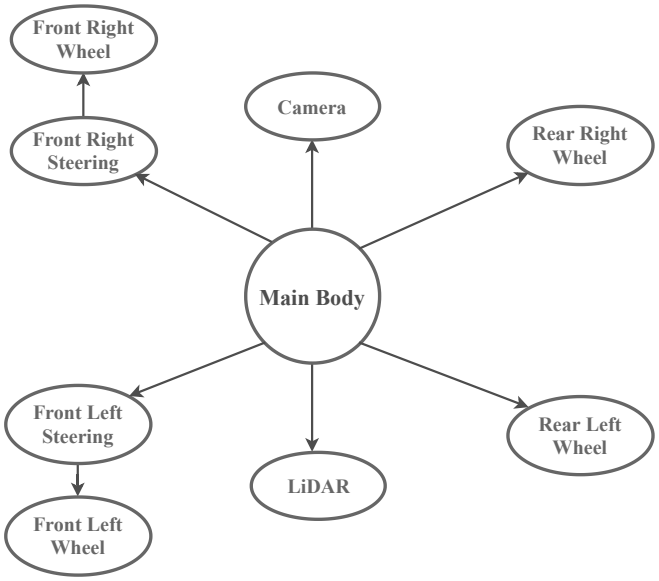


**Fig. 1:** A graph structure of CAT Vehicle model.

$$\int_V p(x,y,z)dV \tag{1}$$

$$y = \frac{\partial(x^2 + e^x + \sin(x))}{\partial x} + \frac{\partial x^5}{\partial x} + \frac{\partial}{\partial x}\cos x + \log_2 x \tag{2}$$

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \tag{3}$$

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I am refering to Equation (2) and (3).

$$\begin{aligned} I_{xx} &= 347.195805 kg/m^2 & I_{xy} &= -11.4914985 kg/m^2 \\ I_{xz} &= 18.5070628 kg/m^2 & I_{yy} &= 2330.10026 kg/m^2 \\ I_{yz} &= 3.97814264 kg/m^2 & I_{zz} &= 2529.41827 kg/m^2 \end{aligned} \tag{4}$$

### B. Create Parts of Robots

This where you define parts of robots

## IV. Enabling Model-based design

## V. Experiments and Results

Describe your experiment and results.

## VI. Conclusion and Future Works

What is the take home message from your research and how community benefited from it? Is there any shortcomings of this projects? Any limitation in the result you got? How will solve them in future? What are the possible extension and application of the current work? What would you like to do in the future?

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