

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,  
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**A project report on  
DESIGN AND FABRICATION OF A FORMULA STYLED  
KART.**

**Submitted in partial fulfillment of the requirements for the degree of  
BACHELOR OF ENGINEERING**

**in  
MECHANICAL ENGINEERING**

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# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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## CERTIFICATE

Certified that the project work entitled **DESIGN AND FABRICATION OF A FORMULA STYLED KART** is a bona fide work carried out by:

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are bonafide students of Mechanical Engineering of Alva's Institute of Engineering and Technology in partial fulfillment for the award of **BACHELOR OF ENGINEERING in MECHANICAL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2019-2020. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

  
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# ABSTRACT

Nowadays as we are moving towards the development, we must improve our technology. One of the big steps towards the technological improvement is in automotive sector. This is possible by creativity and innovation of young automobile enthusiasts. The National Go-Karting Championship is the one of the ways which provides the platform for doing innovations and showing creativity for students. The Go-kart, by definition, has no suspension and no differential. They are usually raced on scaled down tracks but are sometimes driven as entertainment or as a hobby by non-professionals. This report deals with the Design and Analysis of the Formula Styled Go Kart. In a Go Kart the roll cage is one of the main components. The design and calculations are thoroughly studied across various sectors and incorporated in the final blueprint of the Go Kart. The overall fabrication is also studied in this report. The final expenditure of the Kart is incorporated in the report. The report also highlights the contribution of such challenges on students and how they can improve their technical knowledge by being a part of this. This report documents the process and methodology to produce a low cost go-kart which is comfortable, vulnerable, durable and complete in all aspects by modeling it with CAD software. The feasibility of the go-kart design was examined through DFMEA, DVP and Cost report. The team focuses on a technically sound vehicle which is backed by a profound design and good manufacturing practices. The report explains approach, reasons, selecting criteria and expected working of the vehicle parameters. The procedural way of explanation is used for different parts of the vehicle, which starts from approach with the help of known facts, then the design and calculation procedure has been explained. The best way known had been used to go on to the result of all parameters.

**Keywords:** Go Kart, Design, Analysis, calculation, CAD, automobile