



VIENA

Veículo Inteligente Elétrico de Navegação Autónoma
Documentation Guide

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FST Lisboa	Contributor with main parts that made possible the powertrain. Among them are two essential parts, the battery pack and inverter.
Dr. João Fernandes	Co-supervisor of project.
Dr. João Sequeira	Co-supervisor of project.
Dr. Paulo Branco	Co-supervisor of project.
Pedro Costa	Former FST leader. Valuable knowledge contributor to get us started with parts supplied by FST team as well as many suggestions to problems that arise or can arise in future. His experience as former FST leader, saved us may time in problems.
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Contents

List of Tables	vii
List of Figures	ix
Nomenclature	xi
Acronyms	xiii
1 Introduction	1
1.1 Guide Outline	1
1.2 Contributions	1
Bibliography	3

List of Tables

List of Figures

Chapter 1

Introduction

Instituto Superior Técnico (IST) is currently developing research in autonomous electrical vehicles, namely converting from commercial vehicles with upgraded power management. This provides a motivating/attracting setup for new students and a testbed for industry solutions and it is the main motivation for this work.

This guide aims to be auxiliary documentation and future memory source as part of the IST project named Veículo Inteligente Elétrico de Navegação Autónoma (VIENA) and as well as final report for fellowship BL43/2018.

The main goal of the project is a conversion of an old electrical car (Fiat Elettra) property of IST into an autonomous vehicle as framework for future projects or research in this field and also energy efficiency. Within the conversion, researchers, student and collaborators knowledge acquired during academic cycle is put into test and evaluated in a real situation.

1.1 Guide Outline

This documentation guide is organized in four main chapters, server, main sensors, controllers, miscellaneous. In the server is provided information about the used hardware, designed pieces, software configuration needed to get started and connections. In main sensors will be discussed the work done with the current available sensors. New sensor additions should be documented under this chapter. In controllers will be reported mainly hardware controllers and software necessary to connect, configure or communicate with it. Miscellaneous contain other parts that do not fit particularly inside any of those chapters but are necessary or may help in the project.

1.2 Contributions

Main code contributions are available under Github in

Bibliography

