

# Francisco Girbal Eiras

## Research Engineer at FiveAI

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FiveAI (Sep. 2018 - Present)

### Research Engineer

Working on safe and robust solutions for Hierarchical Planning within the Motion Planning and Prediction team in Edinburgh, under the orientation of Dr. Subramanian Ramamoorthy.



Institute for Systems and Robotics, Lisbon (Apr. 2017 - Sep. 2017)

### Graduate Research Assistant

Studied and developed new methods to perform pose estimation through vanishing points in general (central and non-central) omnidirectional cameras which lead to the publication of a paper in one of the top conferences in the field (CVPR'18).

Orientation: Dr. Pedro Miraldo



Institute for Systems and Robotics, Lisbon (Apr. 2016 - Sep. 2016)

### Research Student (Undergraduate)

Constructed modules for gesture recognition using RGB-D cameras, from simple binary classification gestures (e.g. waving) to more complex ones (e.g. pointing estimation) and integrated them in a MONARCH robot as part of the INSIDE project.

Orientation: Dr. Tiago Veiga



## Education

University of Oxford, Linacre College (Oct. 2017 - Sep. 2018)

### MSc Computer Science (Distinction)

Relevant courses: Computational Game Theory, Probabilistic Model Checking

Master Thesis: *"To Err is Human: Designing Correct-by-Construction Driver Assistance Systems using Cognitive Modelling"* under the orientation of Dr. Morteza Lahijanian and Prof. Marta Kwiatkowska



EPFL (Sep. 2016 - Feb. 2017)

### Student Exchange (5.75/6)

Relevant courses: Applied Machine Learning, Image and Video Processing, Lab in Image and Signal Processing

Awarded a monthly scholarship under the Swiss-European Mobility Programme



Técnico Lisboa (Sep. 2013 - Jul. 2016)

### BSc Electrical and Computer Engineering (18/20)

Relevant courses: Algorithms and Data Structures, Signals and Systems, Computational Mathematics, Automatic Control

Among top 2% of the class

Awarded an Academic Excelency Award every year and for the end of the BSc (3 years)



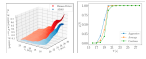
# Publications



## Analytical Modeling of Vanishing Points and Curves in Catadioptric Cameras

Authors: P. Miraldo, F. Eiras, S. Ramalingam

2018 IEEE/CVF Conference on Computer Vision and Pattern Recognition



## To Err is Human: Designing Correct-by-Construction Driver Assistance Systems using Cognitive Modelling

Author: F. Eiras

Master Thesis (Department of Computer Science, University of Oxford)

# Technical Skills

## Research

3D Computer Vision  
Mathematical Optimization  
Formal Verification  
Temporal Logic  
Probabilistic Model Checking  
Neural Networks/Deep Learning

## Programming

Python  
Matlab  
C/C++ (beginner)  
LaTeX  
HTML/CSS/Javascript  
POV-Ray

## Language Skills

Portuguese (native)  
English (fluent - 8.5 overall IELTS)  
Spanish (elementary)  
French: (elementary)

# Accomplishments

2018 - Honourable mention at LauzHack 2018 for SolarRooftops project (using CV for social good)

2017 - ISR-Lisbon Graduate Research fellowship

2016 - Swiss-European Mobility Programme Studying abroad scholarship

2016 - Academic Excelency Award for BSc (over 3 years)

2016 - ISR-Lisbon Undergraduate Research studentship

2015/16 - Elected the Class representative for BSc and 3rd year

2013 - AFS International Scholarship worth \$25,000

2013 - Bronze medals (3rd) at the Delaware State Science Olympiad in Data Analysis and Genetics

# Interests

General interests: Medical Technology, Autonomous Vehicles, Volunteering, Web Design, Economics, Reading, Music, Documentaries, Traveling

Hackathons attended: LauzHack (2016), STARTHack (2017), Junction (2017), LauzHack (2018)