

# ADRIAN SALAZAR-GOMEZ

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## EDUCATION

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- ◇ **PhD in Computer Vision & Robotics, University of Edinburgh** *Edinburgh, UK; 09-2022 - Present*
  - Supervisor: Hakan Bilen
  - Topics: 3D representations, learning dynamics models from videos, articulated 3D shape representation.
- ◇ **MSc Data Science, King's College London** *London, UK; 09-2018 - 09-2019*
  - Artificial intelligence track, Graduated with Distinction. Average grade = 82
- ◇ **MSc Business Analytics, University of Edinburgh** *Edinburgh, UK; 09-2017 - 09-2018*
  - Optimisation track, Graduated with Distinction. Average Grade = 73
- ◇ **BSc in Statistics & Business, University of West Florida & University of Burgos** *USA & Spain; 08-2012 - 07-2016*
  - GPA: 3.86 (University of West Florida), Average: 8.1 (University of Burgos).

## RESEARCH EXPERIENCE

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- ◇ **PhD; Motion prediction and reconstruction of articulated objects** *University of Edinburgh; 09-2022 - Present*
  - Researched how to improve the performance of the motion prediction of articulated objects 3D reconstructions using 2D videos.
  - Supervised by Dr. Hakan Bilen and collaborating with Dr. Octave Mariotti.
- ◇ **Research Assistant; Project: 5G enabled robotic-vision** *University of Lincoln; 01-2021 - 09-2022*
  - Researched how to improve the performance of robotic-vision during the operational time using 5G edge computing.
  - Academic articles as a result of the project: 4. Supervised by Prof. Elizabeth Sklar and Prof. Simon Parsons.
- ◇ **Research Assistant; Project: Computer vision for dense scenarios** *University of Lincoln; 03-2020 - 12-2020*
  - Research in computer vision approaches to operate in occluded and item-dense environments.
  - Academic articles as a result of the project: 1. Supervised by Dr. Petra Bosilj and Prof. Simon Parsons
- ◇ **Research Assistant; Project: Anomaly detection in robotic perception** *University of Lincoln; 03-2020 - 10-2020*
  - Researched Self-supervised learning and One-class classification approaches for anomaly detection to use in field robots
  - Academic articles as a result of the project: 1. Supervised by Dr. Grzegorz Cielniak and Prof. Marc Hanheide.
- ◇ **Research assistant; Project: Vision for human-robot interaction** *King's College London, 06-2019 - 03-2020*
  - Studied the human reactions towards the output of object detection methodologies used by collaborative robots.
  - Academic articles as a result of the project: 3. Supervised by Prof. Simon Parsons and Prof. Elizabeth Sklar.

## TEACHING EXPERIENCE

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- ◇ **Pattern Recognition and Machine Learning,** *King's College London, 2020 and 2021 Spring term*
  - Undergraduate module. Teaching assistant for Prof. Simon Parsons and Dr. Helen Yannakoudakis.
- ◇ **Data Mining,** *King's College London, 2020 Spring term*
  - Masters module. Teaching assistant for Prof. Elizabeth Sklar and Dr. Dimitios Letsios.
- ◇ **Artificial Intelligence,** *King's College London, 2020 Autumn term*
  - Undergraduate module. Teaching assistant for Prof. Peter McBurney and Dr. Frederik Mallmann.
- ◇ **Machine Learning, Big Data, AI, and robotics,** *University of Lincoln, 2020 Autumn term*
  - Undergraduate module. Teaching assistant for Dr. Vassilis Cutsuridis.

## INDUSTRY EXPERIENCE

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- ◇ **Dixons Carphone, Data Scientist** *Edinburgh, UK - October 2017 - May 2018*
  - Applied NLP to predict and understand trends and customer segments from text data retrieved from social media.
- ◇ **Voxbone, Data scientist** *Brussels, Belgium - October 2016 - March 2017*
  - Statistical analysis of customer data and elaboration of reports to support marketing department.
- ◇ **Florida Small Business Development Center, Business consultant,** *Pensacola, USA - January 2016-May 2016*
  - Developed digital marketing strategies based on website data.

- ◇ **University of Burgos Student Union, President Student Council** *Burgos, Spain - September 2014 - August 2015*
  - Organised exam timetables; dealt with communications involving student complains; prepared business school events.

## AWARDS & SCHOLARSHIPS

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- ◇ **Robotics and Autonomous systems CDT PhD scholarship.** *University of Edinburgh, 2022*
  - Scholarship awarded to take on a PhD in the robotics area. *Value: £18000 per year for four years*
- ◇ **King's Education Award 2020** *King's College London, 2020*
  - Teaching award to recognise teachers that supported students in and outside of the classroom.
- ◇ **Erasmus + grant** *European Erasmus system, 2016*
  - European grant awarded on overall academic record to support cross country employment. *Value: €5000*
- ◇ **International Erasmus in USA scholarship** *University of West Florida, 2014*
  - University of Burgos scholarship for outstanding student to study in a USA University. *Value: university fees + €4000*

## PUBLICATIONS

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- **Beyond mAP: Towards Practical Object Detection for Weed Spraying in Precision Agriculture (IROS 2022).**
  - Adrian Salazar-Gomez, Madeleine Darbyshire, Junfeng Gao, Elizabeth Sklar, Simon Parsons.
  - In 2022 IEEE International Conference on Intelligent Robots and Systems (IROS 2022).
- **Self-supervised Representation Learning for Reliable Robotic Monitoring of Fruit Anomalies (ICRA 2022).**
  - Taeyeong Choi, Owen Would, Adrian Salazar-Gomez, Grzegorz Cielniak.
  - In 2022 IEEE International Conference on Robotics and Automation (ICRA 2022).
- **Deep Regression versus Detection for Counting in Robotic Phenotyping (RA-L 2021 & ICRA 2021).**
  - Adrian Salazar Gomez, Simon Parsons, Erchan Aptoula, Petra Bosilj.
  - In IEEE Robotics and Automation Letters, Volume: 6, Issue: 2, April 2021. (RA-L 2021) & ICRA 2021.
- **Localising Weeds Using a Prototype Weed Sprayer (UKRAS 2022).**
  - Madeleine Darbyshire, Adrian Salazar-Gomez, Callum Lennox, Junfeng Gao, Elizabeth Sklar and Simon Parsons.
  - In Proceedings of the 2022 UK Robotics and Autonomous Systems Conference Conference. (UKRAS 2022).
- **The need for speed: How 5G communication can support AI in the field (UKRAS 2021).**
  - Adrian Salazar-Gomez, Tsvetan Zhivkov, Junfeng Gao, Elizabeth Sklar, Simon Parsons.
  - In Proceedings of the 2021 UK Robotics and Autonomous Systems Conference Conference. (UKRAS 2021)
- **Toward robot co-labourers for intelligent farming (HRI 2020).**
  - Zhuoling Huang, Genki Miyauchi, Adrian Salazar-Gomez, Simon Parsons, and Elizabeth Sklar
  - In Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction, 2020 (HRI 2021)
- **An experiment on human-robot interaction in a simulated agricultural task (TAROS 2020).**
  - Zhuoling Huang, Genki Miyauchi, Adrian Salazar-Gomez, Simon Parsons, and Elizabeth Sklar.
  - In Proceedings of the 2020 Annual Conference Towards Autonomous Robotic Systems (TAROS 2020)

## SKILLS

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- ◇ **Programming Languages**
  - Python (used daily), MATLAB, C++, R, SQL.
- ◇ **Machine Learning Platforms & MLOPS Tools**
  - Keras, Tensorflow, Pytorch, Scikit-learn, Amazon Web Services, Google Cloud
- ◇ **Tools & Operative Systems**
  - Linux, ROS, Windows, Git, GitHub, L<sup>A</sup>T<sub>E</sub>X, Google Colaboratory, Unix Shell Scripting (bash), tools for networking analysis.
- ◇ **Languages**
  - English (proficient), Spanish (proficient).