ADRIAN SALAZAR-GOMEZ

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RESEARCH INTEREST

- Statistical ML • Uncertainty in AI • Continual learning • Computer Vision • Neuro-inspired AI • Applied robotics

EDUCATION

⋄ **MSc Data Science (Artificial intelligence track), King's College London** *London, UK; 09-2018 - 09-2019*
- Graduated with Distinction. Average grade = 82

⋄ **MSc Business Analytics (Optimisation track), University of Edinburgh** *Edinburgh, UK; 09-2017 - 09-2018*
- Graduated with Distinction. Average Grade = 73

⋄ **BSc in Statistics & Business,** *Pensacola, USA & Burgos, Spain; 08-2012 - 07-2016*
  University of West Florida & University of Burgos
- GPA: 3.86 (University of West Florida), Average: 8.1 (University of Burgos).

RESEARCH EXPERIENCE

⋄ **Research Assistant; Project: 5G enabled AI for robotic applications** *University of Lincoln; 01-2021 - Present*
- Researching methods to improve performance and coordination of robotic learning systems through 5G edge computing.
- Academic articles as a result of the project: 2. Project 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 regression-based vision approaches for computer vision in occluded and item-dense environments.
- Academic articles as a result of the project: 1. Project supervised by Dr. Petra Bosilj and Prof. Simon Parsons

⋄ **Research Assistant; Project: Anomaly detection in robotic perception** *University of Lincoln; 03-2020 - 10-2020*
- Developed Self-supervised learning and One-class classification approaches for anomaly detection for robotic applications.
- Academic articles as a result of the project: 1. Project 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 equipped in collaborative robots.
- Academic articles as a result of the project: 3. Project supervised by Prof. Simon Parsons and Prof. Elizabeth Sklar.

⋄ **Master's research project; Augmentation for 3D-based classifiers** *King's College London, 01-2019 - 09-2019*
- Evaluated 3D generative Adversarial Networks to generate artificial data to augmented 3D-image classifiers.
- Research project awarded with Distinction. Supervised by Dr. Brendan Michael.

⋄ **Master's research project: Graph ML for behaviour prediction** *University of Edinburgh, 01-2018 - 09-2018*
- Studied the feasibility of customer-product-customer graphs to predict customer behaviours in e-commerce.
- Awarded with with Distinction. Supervised by Prof. Jamal Ouenniche and Dr. Johannes De Smedt.

PUBLICATIONS

- **Towards practical object detection for weed spraying in precision agriculture**. Adrian Salazar-Gomez, Madeleine Darbyshire, Junfeng Gao, Elizabeth Sklar, Simon Parsons. In arXiv (preprint arXiv:2109.11048), submitted to 2022 International Conference on Robotics and Automation (ICRA) .

- **Self-supervised Representation Learning for Reliable Robotic Monitoring of Fruit Anomalies**. Taeyeong Choi, Owen Would, Adrian Salazar-Gomez, Grzegorz Cielniak. In arXiv (preprint arXiv:2109.10135), submitted to 2022 International Conference on Robotics and Automation (ICRA) .

- **Deep Regression versus Detection for Counting in Robotic Phenotyping**. Adrian Salazar Gomez, Simon Parsons, Erchan Aptoula, Petra Bosilj. In IEEE Robotics and Automation Letters (Volume: 6, Issue: 2, April 2021).

- **The need for speed: How 5G communication can support AI in the field**. Adrian Salazar Gomez, Tsvetan Zhivkov, Junfeng Gao, Elizabeth Sklar, Simon Parsons.In Proceedings of the UKRAS21 Conference: "Robotics at Home".

- **Toward robot co-labourers for intelligent farming**. Zhuoling Huang, Genki Miyauchi, Adrian Salazar Gomez, Richie Bird, Amar Singh Kalsi, Chipp Jansen, Zeyang Liu,Simon Parsons, and Elizabeth Sklar. In Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction, 2020 .

- **Understanding human responses to errors in a collaborative human-robot selective harvesting task**. Zhuoling Huang, Adrian Salazar Gomez, Richie Bird, Amar Singh Kalsi, Chipp Jansen, Zeyang Liu,Genki Miyauchi, Simon Parsons, and Elizabeth Sklar. In Proceeding of EPSRC UK-RAS, UKRAS20 Conference: "Robots into the real world".
- **An experiment on human-robot interaction in a simulated agricultural task**. Zhuoling Huang, Genki Miyauchi, Adrian Salazar Gomez, Richie Bird, Amar Singh Kalsi, Chipp Jansen, Zeyang Liu,Simon Parsons, and Elizabeth Sklar. In Proceedings of the 2020 Annual Conference Towards Autonomous Robotic Systems

TEACHING EXPERIENCE

⬦ **Pattern Recognition and Machine Learning**,   *King's College London, 2020 and 2021 Spring term*
  - Last year 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*
  - Last year 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*
  - Last year undergraduate module. Teaching assistant for Dr. Vassilis Cutsuridis.

PROFESSIONAL SERVICE

- **Reviewer**: 39th International Conference on Robotics and Automation (ICRA 2022).
- **Reviewer**: 22st Towards Autonomous Robotic Systems Conference (TAROS 2021).
- **Reviewer**: 21st Towards Autonomous Robotic Systems Conference (TAROS 2020).
- **Conference volunteer**: Eighth International Conference on Learning Representations (ICLR 2020).
- **Conference volunteer**: Thirty-seventh International Conference on Machine Learning (ICML 2020).
- **Reviewer**: 12th International Conference on Social Robotics (ICSR 2020).
- **Program Chair**: 2nd Workshop of Quality of Interaction in Socially Assistive Robots (QISAR 2020) at RO-MAN 2020.
- **Conference volunteer**: Thirty-fourth Annual Conference on Neural Information Processing Systems (NeurIPS 2020).

INDUSTRY EXPERIENCE

⬦ **Dixons Carphone, Data Scientist**   *Edinburgh,UK - October 2017 - May 2018*
  - Applied NLP to predict and understand trends and customer segments from social media data.

⬦ **Voxbone**, **Data scientist**   *Brussels,Belgium - October 2016 - March 2017*
  - Statistical analysis of data and elaboration of explanatory report to support non-experts.

⬦ **Florida Small Business Development Center, Business consultant**,   *Pensacola,USA - January 2016-May 2016*
  - Developed digital marketing solutions such as websites and web-analytic tools for local small businesses.

⬦ **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

⬦ **King's Education Award 2020**   *King's College London, 2020*
  - Award to recognise teachers that supported students in and outside of the classroom.
⬦ **Erasmus + grant**   *Belgium, 2016*
  - European grant awarded on overall academic record to support cross country employment. *Value: €5000*
⬦ **International Erasmus in USA scholarship**   *Pensacola,USA 2014*
  - University of Burgos scholarship for outstanding student to study in a USA University. *Value: university fees + €4000*

SKILLS

⬦ **Programming Languages**
  - Python (used daily), MATLAB, C++, R, SQL.
⬦ **Machine Learning Platforms & Tools**
  - Keras, Tensorflow, Pytorch, Scikit-learn, Amazon Web Services, Google Cloud
⬦ **Tools & Operative Systems**
  - Linux, ROS, Windows, Git, GitHub, LaTeX, Google Colaboratory, Unix Shell Scripting (bash), tools for networking analysis
⬦ **Languages**
  - English (proficient), Spanish (proficient)