ADRIAN SALAZAR

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RESEARCH INTEREST

I am interested in artificial intelligence, machine learning and autonomous systems, especially in explainable AI, intelligent perception, human-robot interaction and data-backed decision making, all of which contribute to the development of collaborative autonomous systems that make decisions in complex environments.

EDUCATION

⋄ **King's College London, MSc Data Science**   *London,UK - September 2018-September 2019*

- Distinction achieved. Overall Grade average = 82
- **Key Modules**: Artificial Intelligence, Machine Learning, Pattern Recognition, Advanced Research Methods in Explainable AI, Computer programming, Optimisation Methods, Data Warehousing & Information Retrieval, Data Mining.
- **Synopsis**: Covered wide scope of topics in artificial intelligence and machine learning. Particularly, in pattern recognition, probabilistic modelling, computer vision, and reinforcement learning.

⋄ **University of Edinburgh, MSc Business Analytics**   *Edinburgh,UK - September 2017-August 2018*

- Distinction achieved. Overall Grade average = 73
- **Key Modules**: Predictive Analytics and Modelling of Data, Media and Web analytics, Mathematical Programming, Industrial Analytics, Simulation modelling and analysis, Heuristic Algorithms, Statistics in Data Science, Game Theory.
- **Synopsis**: MSc focused on mathematical programming, data modelling, statistical learning, and game theory.

⋄ **University of West Florida & University of Burgos**   *Pensacola,USA & Burgos, Spain - August 2012-June 2016*
BSc in Statistics & Business

- GPA: 3.86, Average: 8.1, Dean's list 2015, President's List 2016.
- **Key modules**: Multivariate Methods in Data Analysis, Operations Management, Statistics, Mathematics.
- Awarded with Erasmus scholarship to study in Belgium. Won European scholarship to follow up studies in USA.

RESEARCH EXPERIENCE

⋄ **Research Assistant in**   *Lincoln Centre for Autonomous Systems, University of Lincoln - March 2020 - Present*
Robotic Perception

- Project supervised by Dr. Grzegorz Cielniak and Prof. Marc Hanheide
- Investigating anomaly detection and out of distributions methods for visual assessments with autonomous systems.

⋄ **Research Assistant**   *Lincoln Centre for Autonomous Systems, University of Lincoln - March 2020 - Present*
in Machine Learning

- Project supervised by Dr. Petra Bosilj and Prof. Simon Parsons
- Investigating automated vision-based approaches for counting elements in agricultural settings.

⋄ **Deep Learning Object Detector for Agriculture Robot**   *King's College London - June 2019 - Present*

- Research project supervised by Prof. Simon Parsons and Prof. Elizabeth Sklar.
- Developed deep learning object detection methodologies for autonomous robots in agricultural settings.
- Researching active learning methods to enable human-robot cooperation for safer and trustworthy robot perception.

⋄ **3D Generative Adversarial Networks for**   *King's College London, January 2019 - October 2019*
Augmentation of Human Motion datasets

- Masters research project supervised by Dr. Brendan Michael. Research awarded with First class.
- Developed Generative Adversarial Networks to generate artificial 3D representations to augment 3D DL models.
- Researched and developed 3D image modelling tools and 3D image classifiers.

⋄ **Explainable Artificial Intelligence Literature Review**   *King's College London, November 2018 - March 2019*

- Research for the Advanced Research Methods module. Supervised by Dr. Sanjay Modgil and awarded with First class.
- Developed a systematic literature review of Explainable AI methods, their developments, and applications.

- ⬦ **Predicting Customer Behaviour with**   *University of Edinburgh, January 2018 - August 2018*
  customer-product network features
  - Research project supervised by Prof. Jamal Ouenniche and Dr. Johannes De Smedt. Project awarded with First class.
  - Researched methods to extract informative features from customer-product-customer networks; created a framework to use and compare multiple machine learning tools to predict the online purchasing behaviour in e-commerce.

PUBLICATIONS

- 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, pages 263–265, 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 Network (2020). 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 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.

PROFESSIONAL SERVICE

- 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 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2020).

EXPERIENCE IN INDUSTRY

- ⬦ **Dixons Carphone, Data Scientist**   *Edinburgh,UK - October 2017 - May 2018*
  - Statistical Modelling of customer behaviour using and text data to develop business solutions.
  - Applied machine learning to predict and understand trends and segment customers from text and click-stream data.
  - Develop data pipeline to automatically retrieve and clean text data from social media for its statistical analysis.

- ⬦ **Voxbone**, **Marketing Analyst Intern**   *Brussels,Belgium - October 2016 - March 2017*
  - Analysed datasets to support marketing department; cleaned datasets; query information from datasets.
  - Worked in the company website revamp; negotiated with marketing providers; organised Christmas marketing campaign.

- ⬦ **Florida Small Business Development Center**,   *Pensacola,USA - January 2016-May 2016*
  Business consultant intern
  - Developed digital marketing solutions for local small businesses.
  - Participated in web development; scraped websites; identified strong search keywords; organised multidisciplinary team.

- ⬦ **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.

SKILLS

- ⬦ **Programming Languages**

  - Python (used daily), MATLAB, C++, R, SQL.
- ⬦ **Machine Learning Platforms & Tools**

  - Keras, Tensorflow, Pytorch, Scikit-learn, CUDA, Amazon Web Services, Google Cloud
- ⬦ **Tools & Operative Systems**

  - Linux, ROS, Windows, Git, GitHub, LaTeX, Google Colaboratory, Unix Shell Scripting (bash)