



Daniel Suarez-Mash

Senior Data Scientist at UK Home Office



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SKILLS

Python

TensorFlow

Pytorch

PowerBI

SQL

Jupyter

PyCharm

Git

Command Line Interface

AWS

LANGUAGES

Spanish

Native or Bilingual Proficiency

German

Elementary Proficiency

INTERESTS

Data Science

Cars

Squash

Tennis

WORK EXPERIENCE

Senior Data Scientist

UK Home Office

12/2021 - Present

Achievements/Tasks

- Enhanced core data science skillset by completing the ONS Data Science Graduate Programme (2021-2023), focusing on advanced machine learning techniques.
- Spearheaded a 6-month project to develop a reproducible analytical pipeline, optimising feature retrieval and engineering for immigration data processing. I earned Home Office's Performance Excellence Award for this work.
- Advanced to Senior Data Scientist within 12 months, assuming full responsibility for development, testing, and performance optimisation of supervised ML products. This involved conducting quarterly performance reviews of ML models, effectively communicating complex concepts (recall/precision) to non-technical stakeholders.
- Re-trained ML model for triaging marriage applications, innovatively using recall at K to optimize threshold selection, enhancing performance by 15% while adhering to stakeholder guidelines.
- Oversaw learning and development initiatives within the data science team, maintained a Kanban board, and organised presentations, fostering a culture of continuous improvement and innovation. This involved leading a 3-hour in-person workshop for a team of 30, utilising case studies and interactive activities to generate innovative project ideas, earning a Performance Excellence Award.
- Created a user-friendly PowerBI dashboard to monitor an ML model, incorporating customer feedback and using a bookmark-button technique for enhanced data visualisation.
- Directed a team in the application of time-series techniques to immigration data, enabling accurate 12-month applicant volume forecasts, aiding customer staffing plans.
- Mentored team in implementing advanced data science techniques using R to analyze police workforce data, addressing progression and recruitment rates for BAME officers. Overcame data limitations with exact matching techniques and applied time-series forecasting to predict trends 6-12 months ahead, improving diversity insights for strategic planning.
- Assembled and led a team to explore the use of large language models within the Home Office. Used Streamlit, LangChain and HuggingFace to build a dashboard showcasing the strengths and weaknesses of retrieval augmented generation and agents. Available on my HuggingFace profile.

Private Mathematics Tutoring Self-employed

08/2017 - Present

Achievements/Tasks

- Provided over 2000 hours of tuition to levels ranging from primary school to university.
- Adapted teaching style to accommodate different learning preferences, including students with learning disabilities such as dyslexia and dyscalculia, showcasing flexibility and student-centric approaches.
- Developed personalised learning plans using Notion to monitor individual student progress, resulting in significant improvements in their academic performance.
- Achieved a high satisfaction rate, reflected in over 30 five-star reviews on tutoring profile, highlighting the effectiveness and quality of tutoring provided.

INTERESTS

Football

Piano

EDUCATION

MSc Electrical Automotive Engineering - Distinction & Best Student Coventry University

09/2019 - 08/2020

Courses

- Thesis - Classifying Symbolic Road Markings using deep Convolutional Neural Networks (77/100), published in the European Union Digital Library.
- Power Semiconductor Devices and Converters (97/100) - highest out of cohort.

BSc Mathematics with Finance and Economics - 1st Class City, University of London

09/2016 - 07/2019

Courses

- Vector Calculus (100/100)
- Groups and Symmetry (90.6/100)

EXTRA-CURRICULAR

Committee member - West Warwickshire Sports Club (03/2022 - Present)

Ensuring that decision making at the club is in the best interest of members. I also run the squash leagues at the club.

Student Union, Coventry University (09/2019 - 08/2020)

Senior Course Representative for PG Electronics, IT and Computing Forum.

Friends of Bolivia (06/2015 - Present)

Member of the charity. Regularly help out in the running of fundraising and other charity events.

Solihull Round Table (09/2020 - Present)

Member of the charity helping out with fundraising events.

ACHIEVEMENTS

Faculty award for Best Student in MSc Electrical Automotive Engineering

PostGraduate Taught Academic Excellence Scholarship from Coventry University, 2020

City, University of London Scholarship Programme, 2016- 2019

Professional Consulting (Level 7 award) - Chartered Management Institute (CMI)

Strategic Management and Leadership (Level 7 Certificate) - CMI