Itzel Alejandra **Soto Crisanto**

Data Science & Applied AI Professional · MSc Data Science · B.Sc. Mechatronics Engineering

Applying machine learning and AI to turn complex data into actionable solutions.

itzel.sotoc@gmail.com | linkedin.com/in/Itzel-A-Soto | github.com/ItzelSoto

Summary

Data scientist and mechatronics engineer with 12+ years of experience solving technical, operational and commercial problems across automotive R&D and e-commerce, recently completed an MSc in Data Science and Analytics at the University of Leeds. Applied data-driven analysis to improve engineering and business outcomes, delivering $2.4M in cost reductions at Nissan and 50% year-on-year revenue growth for direct-to-consumer brands. Pursued the MSc to deepen the technical side of that work, gaining hands-on experience in Python, machine learning, deep learning, computer vision and geospatial analysis. Looking to build AI-powered tools, data pipelines and data-driven solutions that solve real operational problems and deliver measurable impact.

Skills

Programming & Data: Python, R, pandas, NumPy, Jupyter Notebook, VS Code, Git, GitHub, GitHub Codespaces, SQL, AI-assisted development (Claude Code, GitHub Copilot).

Machine Learning & AI: Supervised and Unsupervised Learning, Classification, Regression, Random Forest, XGBoost, TensorFlow, Hugging Face, Deep Learning, Computer Vision, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG).

Software & Deployment: Streamlit, HTML, CSS, JavaScript, Systems Design.

Statistics & Modelling: Statistical Modelling, Predictive Modelling, Experimental Design, A/B Testing.

Geospatial Analytics: GeoPandas, QGIS, GIS Analysis, Spatial Analysis, OpenStreetMap, Mapillary and KartaView APIs.

Visualisation & Business Intelligence: Tableau, Looker Studio, KPI Dashboards, Performance Tracking.

Business & Operations: Bill of Materials Costing, Feasibility Studies, Operations Analytics, Customer Analytics, Marketing Measurement, Process Automation, Shopify, Klaviyo, Amazon.

AI & Productivity Tools: ChatGPT, Claude, Perplexity, Gemini, and Copilot for research and workflow automation, Google Workspace, Microsoft Office, Notion, Slack.

Languages: Spanish (Native), English (Excellent — full professional proficiency, IELTS C1).

Professional Strengths: Fast & self-directed learner, Team leadership, Problem-solving, Resilience, Cross-cultural collaboration, Continuous upskilling.

Work Experience

CACI Ltd — Industry Research Project

Leeds, UK

MSc Dissertation Researcher

2025 – 2026

Selected through the competitive GeoDS Scheme to research "Quantifying Street Attractiveness and Retail Performance" with industry partner CACI Ltd. Built a UK data pipeline from the Global Streetscapes dataset on Hugging Face, producing 109,962 street-view locations with computer-vision-derived perception scores, and collected imagery through the Mapillary and KartaView APIs. Aggregated scores to road-segment level, spatially joined them to CACI's retail data and mapped results in QGIS, identifying statistically measurable relationships between perceived street characteristics and retail performance across the UK.

Ecomcapitol

Remote

Founder & Analytics Consultant

2018 - 2025

Established an independent e-commerce consultancy, providing data-driven operations and performance analytics to over 30 direct-to-consumer brands.

Featured Client Projects:

- **MeMolaCreative (Email Marketing Strategist)**
  Analysed email and SMS performance across a portfolio of DTC brands, contributing to $14M+ in attributed revenue through KPI trend analysis, comparative reporting and campaign and flow optimisation.
- **Americanflat (Sr. e-Commerce Manager DTC)**
  Achieved 50% year-on-year (YoY) DTC revenue growth, generating ~$150K in additional revenue through performance analysis and channel optimisation, while managing 3 direct reports, 3 agencies and a $10K monthly PPC budget.
- **Logico Cable (Multi-channel E-commerce Manager)**
  Grew sales 20% YoY, generating approximately $60K in additional revenue across five marketplaces and one Shopify DTC store. Combined channel-performance and customer-service data to pinpoint optimisation opportunities, while integrating logistics automation and improving SEO. Managed a $1K monthly PPC budget and reported on marketplace and DTC performance.

NISSAN *Toluca, MX*

Engine Localisation Team Leader *2017 - 2018*
Engine Management System / Evapo System Design Engineer *2016 - 2017*
Engine Project Management Engineer *2011 - 2016*

- Led end-to-end Bill of Materials costing and feasibility studies for engine components across 12+ new model projects, coordinating cross-functional engineering teams and suppliers to keep designs cost-competitive without compromising quality.
- Delivered $2.4M in cost reduction, recognised with a Vice President Gold Award, through data-driven supplier analysis, quality-trend forecasting and ROI-based recommendations to executive leadership.
- Led international R&D assignments: a six-month transfer of engine programme responsibility from Nissan Aichikikai (Japan) to Nissan Mexico, and supervision of the first engine build at the Resende Engine Factory (Brazil), including technical handover and documentation.

Projects & Activities

- **Image Captioning with Foundation Models — COMP5625M Deep Learning** | University of Leeds, 2026

  Implemented and compared image-captioning pipelines on the COCO dataset, ranging from an RNN decoder written from scratch to pretrained CLIP vision encoders paired with GPT-2 language models, and a ClipCap model fine-tuned on scene descriptions. Debugged the provided model code to enable inference, analysed hallucinated captions, and showed how fine-tuning data shapes model outputs. Additional work included CNN classification on Tiny ImageNet and transfer learning with AlexNet on CIFAR-10.

- **Pharmacy2U Data & AI Hackathon — Bronze Award, Challenge 2** | University of Leeds, 2026

  Co-developed a context-aware clinical recommendation engine using a first-order Markov chain fitted to 3.8M prescription transitions from the CMS DE-SynPUF dataset. Designed condition-specific models across 260,000 National Drug Code (NDC) nodes, with real-time inference through a Streamlit interface integrated with the FDA RxNav API.

- **LeedsHack 2026 — Student Performance Prediction System** | University of Leeds, 2026

  Processed seven datasets from the Open University Learning Analytics Dataset (OULAD) using Python, pandas and TensorFlow to predict student failure and withdrawal risk before the first major assessment. Individually developed a Random Forest classifier, contributed to model benchmarking and led project communication, including the final presentation.

University of Leeds Women's Basketball — 1st Team (2026).

Education

University of Leeds *Leeds, UK*

MSc Data Science and Analytics *2025 - 2026*

- Completed; final classification pending.
- Dual scholarship recipient: SECIHTI (Mexican Government) and University of Leeds International Excellence Scholarship.

UDLAP – Universidad de las Americas Puebla *Puebla, Mex*

BSc in Mechatronics Engineering *2006 - 2012*

- GPA of 8.7/10.
- Full athletic scholarship as a member of the university women's basketball team.

Professional Development

- **Fundamentals of AI Engineering: Principles and Practical Applications — LinkedIn Learning. Production RAG systems, embeddings, vector stores and hybrid search** | 2026
- **RAG and Fine-Tuning Explained — LinkedIn Learning** | 2026
- **Forward Deployed Engineering in the Age of AI — LinkedIn Learning** | 2026
- **Code in Place: Python Programming — Stanford University** | 2024