

Oliver Osvald MSc

Profile Summary

Business-driven data scientist and advanced analytics product developer with a strong foundation in mathematical modelling. Oliver brings over 10 years of experience across diverse roles, industries, and international environments, with a primary focus on solar energy and reinsurance (catastrophe modelling). He specializes in the research, development, and deployment of predictive tools and analytics products, delivering end-to-end solutions from problem framing through to production. What sets Oliver apart is his commercial mindset and entrepreneurial drive. He actively shapes product strategy, leading initiatives to redefine and relaunch analytics products in his current role. A strong advocate for impact-driven work, he challenges assumptions, supports team growth, and fosters a culture built on trust, fairness, and open communication. He is based in Bratislava, Slovakia with personal ties to Singapore and past experience in London, UK.

Work Experience

MAR 2022 - PRESENT

Senior Data Scientist

Solargis, Bratislava, Slovakia

- **R&D of predictive analytics** focussed on automated data quality assessment for PV, solar, and meteorological data
- **Product management** - formulating **business requirements and strategy** for the data analytics department
- Developed novel algorithms which supported Solargis' contribution to the **EU SERENDI-PV innovation project**
- Implemented a modular **data pipeline solution** supporting multiple automatic quality control products
- Researched, developed and deployed quality control **algorithms for time series data**, including:
 - **Classification of PV mounting geometry type** for verification of system type (classical ML)
 - **Detection of PV mounting configuration** for verification of system configuration metadata (optimisation)
 - **PV soiling detection** for detection of medium term signal degradation (statistical model)
 - **Detection of snow in PV production** time series (LSTM)
 - **Multi-instrument issue detection** for leveraging measurement redundancy in quality control (empirical model)
 - **Solar report AI** chatbot for querying an internal repository of historical customer reports (RAG)
- Built and maintained **CI/CD** pipelines orchestrating automated testing and deployment processes of multiple python libraries
- Introduced new services running **Apache Airflow** and **Streamlit** apps for automating production tasks and analytics visualisation
- **Leadership:**
 - Provided guidance and support for junior data scientists
 - Engaged in product design, system architecture, hiring and team planning processes
 - Authored technical/organisational documentation (dev standards, review guidelines, new joiner, etc.)
- **Presented & published** at scientific and technical conferences - IEEE PVSC 2025 & 2026, EU PVSEC 2023, and pyCon SK 2022

JAN 2021 - JAN 2022

Senior Programmer - Data Scientist

Berlin Brands Group, Bratislava, Slovakia

- Deployed multiple data **micro-services (ETL)** using big data and orchestration frameworks (e.g. Spark)
- Created multitude of **PowerBI dashboards** connecting sales and marketing teams with business intelligence data
- Developed and deployed an **image classification AI service** (via **Google Cloud Compute** resource and Flask API)
- Responsible for **procurement, negotiation, and implementation (ETL)** of Euromonitor **market research data**

MAY 2020 - JAN 2021

Data Scientist

Mechanic Tech Lab, Bratislava, Slovakia

- Built a prototype of an **innovative AI-based solution for automation of the 3D animation process**
- Developed, trained and integrated state-of-the-art **machine learning** models in the following domains:
 - **Computer vision** - Trained and deployed deep learning models for **scene depth prediction** and **object segmentation**
 - **Generative models** - Trained and deployed GAN and inverse flow models for **image generation** and **voice synthesis**
 - **NLP** - developed a **text classification** model for camera shot type classification

JUN 2017 - MAY 2019

Catastrophe Modelling Analyst Hiscox Re & ILS, London, UK

- **Structured and priced global reinsurance** treaties and **co-managed exposure** of \$1.5bn risk portfolio
- **Evaluated and validated catastrophe models**, attended industry conferences (2018 RMS, 2019 Impact Forecasting)
- Delivered several **R&D projects** including a **geospatial modelling app** for spatial visualisation of Japan typhoon risk
- **Managed exposure data** and co-produced **regular reports (Lloyd's RDS)**, improved reporting and internal data workflows (SQL)

OCT 2016 - NOV 2016

Natural Hazard Modelling (Internship) JBA Risk Management APAC, Singapore

- Research, 3D simulation and visualisation of **extreme flood and windstorm scenarios** in Hong Kong and Macau region

JUN 2014 - AUG 2016

Project Assistant J. G. Regan, London, UK

- Assisted with **consultancy for large office relocation projects** for several corporations in London
- Responsibilities included **audit, data processing, stakeholder liaison, project management, and planning**

Education

SEP 2015 - SEP 2016

MSc Mathematical Modelling University College London (UCL), UK

- Project: **Flooding in Manhattan-like networks** - MSc project supervised by Prof. Gavin Esler (**Distinction**)
- Highlights: Geophysical Fluid Dynamics, Stochastic Calculus, Traffic Flow Theory, Operational Research, Boundary Layer Theory

SEP 2011 - JUN 2015

BSc Mathematics Queen Mary, University of London (QMUL), UK

- Project: **Comparison of ODE and stochastic models of infectious disease transmission** in Scientific Computing (**First class**)
- Highlights: Probability, Random Processes, Random Networks, Relativity, Quantum Mechanics, Fluid Dynamics, Chaos & Fractals
- Note: Transferred from **BSc Financial Mathematics** at **London Metropolitan University** after completing first two years

Technologies

- **AI tools:** **Claude Code** (agents, skills, MCPs, plugins), **Github Copilot** (code autocomplete - free tier), **Gemini** (token economy)
- **Python libraries:** numpy, pandas, scikit-learn, torch, keras, tensorflow, spark, geopandas, openCV, sqlalchemy, flask, requests
- **DevOps/MLOps:** Unix shell basics, git, Gitlab CI/CD, docker, Apache Airflow, AWS and GCP basics, WandB/MLflow, ONNX
- **Visualisation & UI:** matplotlib, plotly, ggplot, folium, streamlit, Qt, Tableau, PowerBI, LaTeX

Other Skills and Interests

- **Languages:** **English** (fluent), **Slovak** (native), **Czech** (fluent), **German** (B1), **Mandarin Chinese** (HSK2), **Spanish** (A2)
- **Hobbies:** Music production & sound design (project Monkfish), travel, photography, cooking, literature, investing
- **Sports:** Swimming, sailing, scuba diving, board sports (longboarding, snowboarding, surfing)

Working Rights & Availability

- EU national (Slovakia) with full working rights within **EU** and in **Singapore** (LTVP)
- Founder of **oo labs s.r.o.** (LLC): Offering R&D, software development, and consultancy **B2B services**

Appendix - Portfolio

Features in Publications

#	Organisation	Title	Publication
1	Solargis	Assessing PV Energy Loss due to Snow with Meteorological Models	https://userarea.eupvsec.org/proceedings/E-U-PVSEC-2023/4AO.9.2/ (EUPVSEC 2023)
2	Solargis	System of Automatic Detection of PV Mounting Configuration	https://ieeexplore.ieee.org/document/111132471 (IEEE PVSC 2025)
3	Solargis	Impact of Multi-Instrument Quality Control on Reliability of Solar Measurements	TBC (IEEE PVSC 2026)

Projects Delivered

#	Organisation	Project	Type
1	QMUL	Comparison of Infectious Disease Modelling Approaches	Mathematical modelling
2	UCL	Flooding in Manhattan-like Networks	Mathematical modelling
3	JBA APAC	Hong Kong - Macau extreme flooding scenarios	3D flood simulation
4	Hiscox Re & ILS	Spatial evaluation of Japan typhoon risk models	Visualisation, model evaluation
5	Hiscox Re & ILS	Spatial analysis of tropical cyclone Debbie claims data	Mapping and visualisation
6	Hiscox Re & ILS	Analysis of exposure DB metadata in DE market	Exposure metadata analysis
7	Afringa	Comparison of cloud-based speech-to-text services	Model evaluation
8	Quiddich	Motion tracking of cricket players	Mathematical modelling
9	Powerful Medical	ECG classification	Predictive modelling - time series
10	Mechanic Tech Lab	Image depth identification and transformation to 3D	Computer vision, 3D geometry
11	Mechanic Tech Lab	Scene layout generation (deep learning ensemble)	Generative modelling
12	Mechanic Tech Lab	Dialog audio synthesis with style transfer	Generative modelling
13	Mechanic Tech Lab	Camera shot type inference from scripted lines	Text classification
14	Mechanic Tech Lab	MVP AI pipeline for script-to-animation inference	Back-end development
15	BBG	E-commerce marketplace data ETL	API development, ETL
16	BBG	Product image classification	Image classification
17	BBG	Euromonitor data procurement and implementation	API development, procurement
28	BBG	Migration of big data procedures to Spark	ETL migration
19	Solargis	Solar QC pipeline v1.0	Back-end development
20	Solargis	Evaluation of solar QC tools	Evaluation - anomaly detection
21	Solargis	PV mounting configuration identification	Predictive modelling - time series
22	Solargis	PV mounting type classification	Predictive modelling - time series
23	Solargis	PV quality control pipeline v1.0	Back-end development
24	Solargis	GTI mounting configuration identification	Predictive modelling - time series
25	Solargis	Detection of snow in PV energy production series	Anomaly detection - time series
26	Solargis	Detection of soiling in PV energy production series	Predictive modelling - time series
27	Solargis	Production QC pipeline v1.0	Back-end development
28	Solargis	Classification of time series similarity fit quality	Predictive modelling - time series
29	Solargis	Multi-instrument anomaly detection	Anomaly detection - time series
30	Solargis	Solar reports AI	LLM / RAG

