**Ivan Ivani, PhD**

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| **PROFILE** |

Accomplished data specialist with a decade of experience in machine learning, predictive modeling, and optimization. Proven expertise in leading data science teams, building scalable analytical models, and developing AI-driven solutions for manufacturing, bioinformatics, and business analytics. Adept at driving innovation, automating analytical workflows, and providing actionable insights to stakeholders.

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| **EDUCATION** | |
| * **PhD in Bioinformatics** *(cum laude),* University of Barcelona, Spain | **Dec 2016** |
| * **MSc in Physics** *(top 2% of the class),*Charles University, Czechia | **Jun 2010** |
| **PROFESSIONAL EXPERIENCE** | |
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| **Data Scientist** | **Aug 2023 – Present** |
| *R&D – Continental – Hybrid* | |
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| * Leading a data science team across multiple locations, fostering innovation and collaboration. * Built and maintained a data management system for optical experiments and production data, streamlining global R&D efforts. * Developed predictive models using neural networks and SHAP analysis to optimize display design and minimize scrap. * Automated data processing workflows to improve efficiency and ensure data integrity. * Designed interactive dashboards in Power BI to provide actionable insights to stakeholders. | |
| **Senior Business Analyst** | **Jan 2023 – Dec 2023** |
| *R&D – Syngenta – Remote* | |
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| * Led a team of software developers in designing advanced features for Next-Generation Sequencing (NGS) analysis. * Delivered comprehensive analytics reports and data-driven recommendations to senior management. | |
| **Data and Analytics Manager** | **Jul 2018 – Jun 2023** |
| *Protection Unit – ICRC – Geneva, Damascus, Jerusalem and Caracas* | |
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| * Managed a globally distributed team, providing training in SQL and Python. * Developed ML models for forecasting humanitarian response. * Automated ETL processes and dashboards integrating external data into humanitarian frameworks. * Led strategic initiatives to improve data governance and quality management. | |
| **Research Scientist** | **Jan 2010 – Jun 2017** |
| *Institute for Research in Biomedicine - IRB Barcelona, Spain* | |
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| * Developed force-field models for molecular dynamics simulations of DNA. * Applied machine learning techniques to interpret complex biological data. * Published high-impact research, including *Ivani et al., Nature Methods (2016)*. | |
| **Intern Scientist** | **May 2015 – Aug 2015** |
| *Stanford University and Pfizer, USA* | |
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| * Optimized MD simulation software in collaboration with the pharma industry. * Integrated experimental findings into simulation parameterization for short DNA sequences. | |
| **PROJECTS** | |
| * **Display Design Optimization Model:** Developed a neural network model to predict optical properties, enabling data-driven design improvements. * **Sepsis Prediction in EHR Data:** Implemented deep learning models to predict sepsis risk using clinical datasets. * **Fingerprint Recognition Model:** Built a machine learning pipeline to identify fingerprint patterns with augmented deformations, leveraging advanced data augmentation techniques to improve accuracy. * **Fraud Detection in HTTPS Requests:** Developed algorithms to detect anomalies in encrypted web traffic, enhancing cybersecurity through real-time fraud detection. * **Traffic Predictor for a Recipe Webpage:** Designed and implemented a machine learning model using Random Forest Classifiers to predict high-traffic content for a recipe website, driving content optimization strategies. * **Force-Field Optimization Using ML:** Automated the optimization of MD Force-fields by automating QM calculations, validating it with experimental data. * **Open-Source Events Tracking Tool:** Conceived and developed an interactive tool that processes and visualizes key humanitarian events from open-source data, facilitating timely decision-making and strategic planning. | |
| **SKILLS AND EXPERTISE** | |
| * **Data Science & Machine Learning:** Predictive modeling, time-series forecasting, econometrics, deep learning, SHAP analysis. | |
| * **Programming:** Python (Pandas, Scikit-Learn, TensorFlow, PyTorch), SQL, Git. | |
| * **Big Data & Analytics:** Power BI, Tableau, AWS, ETL pipelines. | |
| **LANGUAGES** | |
| * English (Fluent), Spanish (Fluent), Czech (Fluent), Serbian (Native), German (Proficient). | |
| **CERTIFICATIONS & PUBLICATIONS** | |
| * Published research in high-impact journals. Full list of my publications: <https://scholar.google.com/citations?user=GqCZ-0QAAAAJ&hl=en> * Certified Data Scientist Professional - DataCamp * Certification in Machine Learning & Deep Learning (Coursera, deeplearning.ai) * Certification in AWS – Data Engineering Associate | |
| **ADDITIONAL INFORMATION** | |

* Willingness to travel and relocate (no relocation allowence needed).
* Passionate about innovation, AI and GenerativeAI.
* Nature lover, a sportsman and a fan of climbing.