Mario Lovrić

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Senior Data Scientist | Cheminformatician

Data scientist with 3 years experience in industrial, chemical and medical projects. Skilled in Python, predictive modelling and machine learning. Pursuing a PhD degree in cheminformatics with a topic in predictive toxicology.

Professional Experience

▲ 07.2017 − present	**Senior Data Scientist	Know-Center	Austria** -Application-oriented research in supervised and unsupervised machine learning -Project lead across various domains such as traffic, manufacturing and medicine -Writing scientific papers and funding proposals -Successfully implemented a predictive maintenance procedure causing cost reduction -Lead team of 2-3 data scientists
⏳ 12.2018 − 05.2020	**Biomedical data scientist (part-time)	Children's Hospital Srebrnjak	Croatia** -Data analysis and predictive modelling in respiratory diseases -Writing project proposals and scientific papers (H2020, EraPerMed)
⏳ 03.2015 − 07.2017	**Analytical chemist	Teva Pharmaceutical Industries	Croatia** -Supervised and trained internists and students in chemical analysis -Developed chemical analysis methods for new active pharmaceutical ingredients (APIs) -Successfully validated and transferred analytical methods to Quality Control -Implemented the Accelerated Stability Assessment Program for pharmaceuticals
⏳ 02.2014 − 03.2015	**Junior scientist	University of Basel	Switzerland** -Assisted in practical classes of general and inorganic chemistry -Research project: Development of a miniature microplasma gas chromatography detector for chemical analysis -Developed and tested electric circuits and detector prototypes -Wrote Python programs to drive prototype components
⏳ 09.2012 − 09.2013	**Junior scientist	AC2T Research	Austria** -Analysed fuels, lubricants and their ageing products with chemical analysis instruments -Presented scientific work at conferences and to customers -Managed work-packages in chemical analysis and mandated projects

Research visits

⏳11.2019–12.2019	**Institute of Molecular Chemistry	University of Reims	France** Data science research project in data analysis of NMR spectra
⏳10.2016–11.2016	**Laboratoire de Chémoinformatique	University of Strasbourg	France** Data science research project in QSAR analysis of chromatographic parameters

Education

🎓 11.2015 - 06.2021	**PhD Cheminformatics (defense announced)** Faculty of Science - Chemistry Department | University of Zagreb | Croatia Thesis: Development and application of models for ecotoxicological risk assessment of bioactive chemical compounds
🎓 10.2010 - 7.2012	**M.Sc. Applied Chemistry** Faculty of Chemical Engineering and Technology | University of Zagreb | Croatia
🎓 10.2005 - 9.2010	**B.Sc. Applied Chemistry** Faculty of Chemical Engineering and Technology | University of Zagreb | Croatia

Courses & Certificates

🎓 06.2020	**Big Data Specialization** Coursera | Introduction to Big Data; Big Data Modeling and Management Systems; Big Data Integration and Processing; Machine Learning With Big Data; Graph Analytics for Big Data
🎓 06.2020	**Deep Learning Specialization** Coursera | Neural Networks and Deep Learning; Improving Deep Neural Networks: Hyperparameter tuning; Regularization and Optimization Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models
🎓 03.2016	**Machine Learning course** Coursera

Languages

Croatian	Native
German	Native
English	Fluent
French	Beginner

Soft skills

Managerial	Willing to take lead, experience in leading data scientists
Social	Outgoing and communicative personality, familiar to intercultural environments

Technical skills

Data analysis	Dealt with data engineering, predictive maintenance, forecasting and machine learning
Programming	Linux, Spark, Python, Scikit-Learn, Tensorflow, PyTorch, RDKit
Chemical Laboratory	Used chromatographic, electroanalytical and spectrometric instruments

Published research

1. Lovrić M. et al. Prediction of anode lifetime in electro galvanizing lines by big data analysis. In Proceedings of the GALVATECH 2020; Vienna, 2020.
2. Žuvela P.; Lovric M.; et al. Ensemble Learning Approaches to Data Imbalance and Competing Objectives in Design of an Industrial Machine Vision System. Ind. Eng. Chem. Res. 2020, 59, 4636–4645, doi:10.1021/acs.iecr.9b05766.
3. Lovrić M. et al. Understanding the true effects of the COVID-19 lockdown on air pollution by means of machine learning. Environ. Pollut. 2020, 115900, doi:10.1016/j.envpol.2020.115900.
4. Lovrić M. et al. Parasitic resistance as a predictor of faulty anodes in electro galvanizing : a comparison of machine learning , physical and hybrid models. Adv. Model. Simul. Eng. Sci. 2020, doi:10.1186/s40323-020-00184-z.
5. Lovrić M. et al. Machine learning in prediction of intrinsic aqueous solubility of drug-like compounds: generalization, complexity or predictive ability? chemrxiv 2020, doi:10.26434/chemrxiv.12746948.