

HOJJAT RAKHSHANI

📍 France, Lille 📞 +33771111368

✉ [Gmail](#) [LinkedIn](#) [Github](#) [Publications](#)

Skills

Data Science: A/B testing, optimization, big data pipeline (cleansing, wrangling, visualization, modeling, interpretation), AutoML, statistics, time series, Scrum fundamentals, Github

Programming Languages: Python (Pandas, scikit-learn, pytest, Tensorflow, PyTorch, SciPy, NLTK, Gensim), SQL, R, C++, Java

Cloud Machine Learning: AWS (SageMaker, ECR, EMR, S3, RedShift), Spark, DataBricks, Airflow

Professional Experience

Decathlon

May 2021–Present

Data Scientist

Lille, France

- Developed assortment optimization solutions to maximize the expected revenue and minimize stock cost for physical stores, results in 50 million euros of improvement in total sales.
- Supported business insight to put latent meanings into the products using semantically rich embedding that would serve 4+ AI teams. This initiative includes product description embedding using BERT model, visual embedding using deep learning, and user product embedding using node2vec graph approach.
- Delivered a 1-year forecasting model to predict turnover for each store and family using hyperparameters optimization and SageMaker pipelines.
- Presented XGBoost regression to infer the effect of Covid data presence on stores forecast models.
- Supervised to analyze the needs, define the target stack and support the team to streamline and move our AI solutions on SageMaker, DataBricks, and Airflow.

University of Upper Alsace

July 2020–April 2021

Research Scientists

Mulhouse, France

- Proposed an AutoML pipeline which identifies links between similar scientific articles. This project led to the creation of a precise classifier reaching an accuracy of 90%, and has been published in proceedings IEEE WCCI 2020.
- Directed neural architecture search to find and train deep residual networks for time series data. The conducted experiments on 85 instances reveals the proposed model reaches new state-of-the-art accuracy compared to HIVE-COTE model. This work has been published in IJCNN 2020.
- Examined a network interdiction multi-depot vehicle routing model.

University of Upper Alsace

May 2017–June 2020

PhD Research Assistant

Mulhouse, France

- Proposed an novel optimization technique based on transfer and ensemble learning to reduce the required computational resources by storing knowledge gained while solving optimization problems to a different but related one.
- Applied metaheuristics on Two-Stream Inflated 3D architecture model, pre-trained on the ImageNet and the Kinetics source datasets, to optimize crowd movements prediction on the Crowd-11 target dataset.
- Formulated a multi-objective framework for automatic configuration of machine learning models.

Education

- PhD in Computer Science, University of Upper Alsace 2017–2020
- Master of Computer Science, University of Sistan and Baluchestan 2013–2016
- Bachelor of Computer Science, University of Sistan and Baluchestan 2009–2013

Honors and Awards

- 100% PhD scholarship for research and innovation 2017–2020
- Outstanding dissertation award 2020
- First prize in CG:SHOP Optimization Challenge, Oregon State University 2019
- Outstanding master's student award 2016

Langues

English: Fluent, **French :** Intermediate, **Persian :** Native