Hojjat Rakhshani

France, Lille +33771111368

Gmail LinkedIn Github Publications

Skills

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

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

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

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 in a collaboration with University of Kaiserslautern.

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, University of Upper Alsace 2017–2020
- Outstanding dissertation award, University of Upper Alsace 2020
- First prize in CG:SHOP Optimization Challenge, Oregon State University 2019
- Outstanding master's student award, University of Sistan and Baluchestan 2016

Langues

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