# Taycir Yahmed

## Software Engineer in NLP and Machine Learning

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## Coding

python (expert), C++ (prior), SQL (proficient), java (prior)

#### **Machine Learning**

pytorch, sklearn, tensorflow, spark ml

## **Big Data**

hadoop, spark, kafka, elasticsearch.

#### Other tools

linux, git, docker, CI.

## Languages

English: Trilingual French: Trilingual Arabic: Trilingual German: Beginner Chinese: Beginner Spanish: Intermediate

## Education

## Master of research, Paris-Saclay University, 2018

- Deep/Machine learning, image processing, NLP, big data.
- Projects: Fake news detection, recommender system, chatbots.

#### Master of Science, Telecom ParisTech, 2017

- Data science, optimization, statistics, applied mathematics. GPA 4.
- Projects: Face recognition, sounds identification, credit scoring.

### Master of Engineering, INSTITUT MINES TELECOM - SUPCOM, 2016

- Top of the school. Information and communication technologies.
- Project: Customer satisfaction using NLP and machine learning.

## Experience

## NLP & Machine Learning Eng, BNP Paribas | FRANCE, JAN 18 - NOW

Mission: Multilingual text classification automated pipeline.

- Identified more than .6M clients' missing information to ensure the company's compliance, using transfer learning and fine-tuning of multilingual LMs.
- Automated text classification tasks by building a tool 'from data to API'.

Mission: R&D to advance speech-to-text in low resource setups.

• Helped call centers controllers identify and prioritize problematic situations, using speech-to-text and text analysis, on low resource languages.

Mission: Data augmentation for neural machine translation.

- Increased the BLEU score using bilingual dictionaries, clause detection and segmentation with **attention weights**, back-translation and synthetic contexts.
- Handled rare words for better translations using BPE, normalization with **named-entity** recognition and external knowledge integration.
- Improved context **disambiguation** using pre-trained word embeddings and linguistic features: part-of-speech tags, dependency parsing labels and lemmas.

Mission: Internal document matching for specialized machine translation.

- Matched multilingual documents to create a parallel in-domain corpus, using OCR, a cross-lingual version of **bag-of-words** and sentence alignment.
- Trained **specialized** neural machine translation models, using fine tuning, up-sampling and domain tags as additional features, using GPUs.

#### Big data science intern, Renault | FRANCE, JUL - SEP 17

Mission: Production-ready predictive maintenance solution for the factories.

- Predicted +87% of future defects, by implementing an end-to-end solution, with batch machine learning, **continuous integration** and log monitoring.
- Reduced manufacturing costs by providing business teams **real-time** visualization dashboards, based on **stream processing** in a big data cluster.

## Analytics/data science project, CB Group | FRANCE, FEB - JUN 17

Mission: Data analytics to support deeper market understanding.

- Delivered insights about the company's market share in 732 economic sectors.
- Modeled the geographic density: hypothesis testing and variable importance.
- Developed a dashboard to visualize the findings with Google design patterns.

#### Data science intern, IBM | Tunisia, Jun - Aug 16

Mission: Pilot project to test IBM Data Science Experience cloud platform.

## Mobile & analytics intern, IBM France Lab | FRANCE, JUN - AUG 15

Mission: Mobile app to determine the adequate profile for an emergency.

## Seeds For The Future Program, Huawei | CHINA, 2016

Technical training at Huawei labs and language courses at Beijing University.