

SUMMARY

Data scientist with 3 years of experience in developing machine-learning-based software using R and Python. Successfully managed data analytic projects in industry and academia from conception to production.

EDUCATION

- **Master of Science in Electrical Engineering and Computer science** May 2020
University of North Dakota *Grand Forks ND, USA*
- **Bachelor of Science in Applied Mathematics - Minor in Statistics** August 2017
École Mohammedia des Ingénieurs *Rabat, Morocco*

EXPERIENCE (SELECTED)

- **Graduate Research Assistant** August 2018 - Present
University of North Dakota *Grand Forks ND, USA*
 - **Classification of Cardiac Anomalies:** Currently contributing to the [PhysioNet 2020](#) Project at UND to develop a +100 Multi-label Time-series classification model based on Deep learning. In this project, we are trying to detect more than +100 labels of heart diseases (ECG abnormalities).
 - **Churn Prediction in Clinical Context:** Design of machine learning model to detect patients with blood poisoning, sepsis, based on clinical data 6 hours earlier than a doctor. My paper and results are published in the CinC 2019 Conference in Singapore. [\[PDF\]](#) [\[Code\]](#)
 - **Deep Energy Retrofit:** for my second paper, I worked on building a scalable machine learning model to predict energy consumption per building in different locations using python.[\[PDF\]](#)**Technologies:** Python, GitHub, Docker, Google Cloud, Parallel computing, ETL, Visualization, Linux
- **Data Scientist** Dec 2017 - June 2018
BMCE Bank Of Africa Group - SALAFIN *Casablanca, Morocco*
 - **Financial Risk Management:** As a data scientist, I designed and deployed new machine learning system for Credit Default Risk and Credit Loss Evaluation. I accomplished performance of 80% for Credit Risk, and I achieved 90% for Credit Loss on some financial products and at least 70% on most of them. Resulted in cutting \$1.0M in financial credit losses.
 - **Credit Fraud Risk Management:** I contributed to building an automated loan fraud detection system by conducting fraud cases assessment and audit and establishing a robust training and testing data.**Technologies:** Auto-ML with H2O, Spark, R, Python, ETL programming, Shell scripting
- **Data Scientist - Co-op** Feb 2017 - June 2017
OCP Group SA *Casablanca, Morocco*
 - **Predictive Maintenance:** As a data scientist, I designed and deployed a machine learning system to predict failures of critical routing machines in the plant using R. Model performance achieved over 80%.[\[PDF\]](#) [\[Code\]](#)**Technologies:** R, R-shiny, Data Visualization with R, ETL programming

PROGRAMMING SKILLS

- **Languages:** Python, R, SQL, C/C++, CUDA , Java **Tools:** Google Cloud, Docker, AWS, Spark, Hadoop

AWARDS (SELECTED)

- **Graduate Student Award - Excellence in Entrepreneurship :** *Johannesburg, South Africa , 2015*
- **Fulbright Scholarship:** *Rabat, Morocco , 2017*
- **Google Grant - Sepsis Research:** *San Francisco , USA, 2019*
- **NSF Student Award for IEOM Society:** *Toronto, Canada, 2019*