

## SUMMARY

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- Earned 2 years of experience in applied machine learning to different business areas, from manufacturing and mining industry to finance/banking and later in medicine. Proficient in building models with R and Python.

## EDUCATION

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- **University of North Dakota** Grand Forks ND, USA  
*M.Sc of Electrical Engineering & Computer science - minor in Bioinformatics* August 2018 – May 2020
- **École Mohammedia des Ingénieurs** Rabat, Morocco  
*M.Sc in Industrial Engineering - Supply Chain & Management* Sept. 2014 – August 2017

## LANGUAGES

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- **PROGRAMMING:** Python,R, C/C++, CUDA , SQL, Java **Languages:** English, French, Arabic

## EXPERIENCE (SELECTED)

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- **Bioinformatics Graduate Researcher - Machine Learning** University of North Dakota, USA  
*Biomedical Engineering Research Complex* August 2018 - Present
  - **Early Detection Sepsis from Clinical Data:** Served as the project leader. The mission is to detect septic patients with blood poisoning based on clinical data. See publications
  - **ECG-Biometrics Security System:** Authenticate individuals based on their heart beats.**Technologies:** Python, GitHub, Docker, Google cloud, GPU Parallel computing, linux
- **Data Scientist** Casablanca, Morocco  
*BMCE Bank Of Africa Group - SALAFIN* Dec 2017 - June 2018
  - **Credit Default Risk:** setup, design and management of an automated machine learning for credit default risk evaluation in the bank
  - **Credit Fraud Detection:** Contributed to building an automated loan fraud detection system.
  - **Natural Language Processing (R):** Text Clustering for Topic Detection**Technologies:** Auto-ML with H2O, Spark, R, Python, ETL programming, Shell scripting
- **Data Scientist** Casablanca, Morocco  
*OCP Group SA* Feb 2017 - June 2017
  - **Predictive Maintenance:** I developed a machine learning model to predict failures events of routing machines in the plant. The data-set was based on the working conditions and failure events history of the routing machines.
  - **Data visualization:** I developed a web application to be available online (with R-shiny) and integrated with the original website of the predictive maintenance in the plant.**Technologies:** R, R-shiny, Data Visualization with R, ETL programming

## RESEARCH PUBLICATIONS IN MACHINE LEARNING - FIRST AUTHOR

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- **Conference Paper:** "Early Prediction of Sepsis: Comparative study between Boosting Trees and survival LSTM". Computing in Cardiology Conference PhysioNet 2019 , USA, Singapore [[Abstract](#)] [[Full Paper](#)]
- **Thesis:**"Applied IoT & Survival Analysis for the predictive Maintenance in the plants of OCP Group". June 2017, Ecole Mohammedia des ingénieurs , MED V University, Rabat, Morocco.

## AWARDS AND COMMUNITY SERVICES (SELECTED)

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- **Google Scholarship - Sepsis Research:** San Francisco , 2019-Present
- **Fulbright Scholarship:** Morocco , 2017-Present
- **3rd champion of the worldwide contest in South Africa:** ENACTUS Morocco , 2014 - 2015
- **Team Leader:** Engineering Schools Forum, 2014 - 2017