

SUMMARY

- 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

- **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 Sept. 2014 – August 2017
- **Classes Préparatoires aux Grandes Écoles (French System)** Laayoune, Morocco
BS, Math&Physics (Top 10% student on the national scale (450th/4800)) Sept 2012 – June 2014

LANGUAGES

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

EXPERIENCE (SELECTED)

- **Bioinformatics Graduate Researcher - Machine Learning (ML)** University of North Dakota, USA
Biomedical Engineering Research Complex August 2018 - Present
 - **ECG-Biometrics Security System:** Developing a ML Approach to authenticate individuals based on their heartbeats.
 - **Churn Prediction in Clinical Context:** Served as the project lead. The mission is to detect patients with blood poisoning 6 hours earlier than a doctor based on clinical data. I published [our findings](#) in CinC 2019 Conference.
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:** Designed and deployed an new machine learning system for Credit Default Risk and Credit Loss Evaluation. I accomplished a 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 Detection:** Contributed to building an automated loan fraud detection system.
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:** As a data scientist, I designed and deployed a new system to predict failures events of critical routing machines in the plant. Model performance achieved over 80%. [[Thesis](#)] [[GitHub](#)]
 - **Deployment:** 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

- **Peer-Reviewed Conference Paper:** Soufiane Chami, Kouyar Tavakolian , "Early Prediction of Sepsis from Clinical Data Using Single Light-GBM model". CinC 2019 , USA, Singapore [[Abstract](#)] [[Full Paper](#)]
- **Graduate Thesis:**"Machine Learning Decision-Making Tool for Predictive Maintenance". Soufiane Chami, Nizar El-Hachemi, June 2017, Ecole Mohammedia des ingénieurs , MED V University, Morocco. [[Thesis](#)]
- **Peer-reviewed Paper [Pending- Abstract submitted]:** Cardiokey: A Machine Learning Approach to Identify Individuals Using Electrocardiographic Signals on Wearable Devices". ICBBE 2020 ,Montreal, Canada

POSTERS

- **Physiological Time Series:** "Automated Analysis of Arousals, Sleep and Sleep-Related Disorders Using Physiological Time Series. ". Soufiane Chami, Kouhyar Tavakolian, Annual North Dakota Biomedical Engineering Symposium 2018 , USA
- **Churn Prediction in Clinical Context:** "Early detection of sepsis using Light-GBM". Soufiane Chami, Kouhyar Tavakolian, Annual North Dakota Biomedical Engineering Symposium 2019 , USA

AWARDS (SELECTED)

- **NSF Student Funding Award for IEOM Society:** *Toronto, Canada, 2019*
- **Google Scholarship - Sepsis Research:** *San Francisco , 2019*
- **Fulbright Scholarship:** *Morocco , 2017*
- **3rd World Champion ENACTUS:** *Johannesburg, South Africa , 2015*

COMMUNITY SERVICES (SELECTED)

- **Field Project Management:** *ENACTUS Morocco , 2014 - 2015*
- **Students & School Fair Team Leader:** *Association Prepas Sud, 2014 - 2017*
- **Boy Scout:** *Scouts of Morocco Association, 2008 - 2012*