# CHAMI Soufiane Data scientist USA Fulbright Fellow

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### 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**

### LANGUAGES

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

### EXPERIENCE (SELECTED)

Bioinformatics Graduate Researcher - Machine Learning

University of North Dakota, USA

Biomedical Engineering Research Complex

August 2018 - Present

- Churn Prediction in Clinical Context: Served as the project leader. The mission is to detect septic patients with blood poisoning based on clinical data. See publications section.
- ECG-Biometrics Security System: Authenticate individuals based on their heartbeats.

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.
- o 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

Feb 2017 - June 2017

OCP Group SA

- **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

- 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]: Cardiokey: A Machine Learning Approach to Identify Individuals Using Electrocardiographic Signals on Wearable Devices". ICBBE 2020 ,Montreal, Canada

# Abstract/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

 $\circ\,$  Google Scholarship - Sepsis Research:

 $\circ$  Students & School Fair Team Leader:

 $San\ Francisco\ ,\ 2019$ 

• Fulbright Scholarship:

Morocco , 2017 Johannesburg, South Africa , 2015

o 3rd World Champion ENACTUS:

## COMMUNITY SERVICES (SELECTED)

• Field Project Management:

ENACTUS Morocco , 2014 - 2015

Association Prepas Sud, 2014 - 2017

o Boy Scout:

Scouts of Morocco Association, 2008 - 2012