CHAMI Soufiane
Data scientist
USA Fulbright Fellow

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Website
LinkedIn
Kaggle

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 leader. The mission is the early detection of septic patients with blood poisoning based on clinical data [Full Paper].

  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 achieved 90% on some financial products and 70% on most them.
  - **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 an data science intern, I designed and deployed a new system to predict failures events of critical routing machines in the plant. Model performance achieved over 80%.[Thesis]
  - **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]:** 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*
- **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*