CHAMI Soufiane
Data scientist
USA Fulbright Fellow

soufiane.chami@und.edu

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**: Designing ML Approach to authenticate individuals based on 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. Our findings are published in the 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.

- **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*
- **Graduate Student Award - Excellence in Entrepreneurship** :   *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*