

LOANN BRAHIMI

Quantitative research



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LoannData

Technical Skills

Overview



Programming

Python • Scikit-Learn • Tensorflow

C++ • Shell • \LaTeX

PostgreSQL • Django • MongoDB

Education

PhD., Astrophysics

Transport theory - Turbulence MHD -
Computing Science

University of Montpellier

2017 - 2020 | Montpellier, France

MSc., Fundamental Physics, rank 1

University of Montpellier

2015 - 2017 | Montpellier, France

Certifications

Deep Learning Specialization

MLOps Specialization

Experience

Dec 2020 -
Sep 2021

Co-founder & Full Stack Quant Developer/Researcher

Q26

- Development of a trading strategy backtest system and a real time trading system framework allowing to execute a trading strategy on every broker compatible with MT4 trading platform and IBKR TWS. These frameworks are available for free for any algorithmic trading developer who want to focus on its trading strategy only.
- Research & Development of an exotic trading strategy which doesn't try to predict the future of financial market but takes advantage of turbulence in price thanks to Deep Learning and Genetic optimization tools.
- Development of a concept/prototype of a semi-automatic algorithmic trading framework allowing to edit strategies and risk management hyperparameters in real time.
- **Tools:** Python, Scikit-Learn, TensorFlow, Dash, MongoDB, MQL4

May 2016 -

Data Analyst, Research fellow, Characterization of the high energy Astrophysical source H.E.S.S. J1848-018

LUPM

Jul 2016

- Environmental and multi-wavelength study of the source H.E.S.S. J1848-018 - Emission spectra reconstruction over a wide energy band, power-law fitting and quantitative analysis.
- **Tools:** Python, Scikit-learn, Naima, \LaTeX

Research

2017 - 2020

PhD., Research fellow in Astrophysics

University of Montpellier

Thesis: Cosmic Ray transport in the weakly ionized turbulent interstellar medium

- Development of a transport code describing the non-linear injection of Cosmic Rays in a multiphase turbulent interstellar medium from supernova remnants.
- Implementation of a numerical non-linear advection/diffusion method in the AMR-MHD Astrophysics code RAMSES to describe the effect of the turbulence generated by cosmic rays instabilities on the interstellar medium turbulent, and thermodynamic properties.
- Publications, conferences
- **Tools:** Python, C++, Fortran90, \LaTeX
- **Mathematics background:** Numerical Methods, PDE systems solving, Stochastic Calculus, Transport & Turbulence Theories

Other projects

May 2015 -
Current

Science popularizer, website about Astrophysics

Physique & Réussite

- More than 60 articles for students/general public about concepts in Astrophysics
- Average of 2000 unique users per month
- Recommended by university professors to their students
- **Tools:** WordPress

2017 - 2020

Teaching, Assistant professor, Internship manager

University of Montpellier

- 64 hours of tutorial given to first year students about general physics
- 100 hours of tutorial given to third year students about experimental physics
- 2 months, master student internship management. Analytical & Numerical studies of the Cosmic Rays propagation in the Interstellar Medium.