Marie-Félicia Beclin
Montpellier, France— mariefelicia.beclin@gmail.com — 0687470308 linkedin.com/in/johndoe — France

EDUCATION

University of Montpellier, Montpellier, France 10/2021 — 11/2024 (Expected)
PhD Project : Statistical analysis of thoracic computed tomography scanner in case of asthma patient treated by Benralizumab

The objective is to ascertain its efficacy of Benralizumab, a medication to treat asthma. The different steps of the project consist of :

- CT Scan segmentation (with two separate techniques : by theresholding with ITK and by neural network "Lungmask") and B-spline registration between inspiration and expiration
- Computation of histogram in 1D and in 2D
- Computation of the PRM, parametric response map
- Bibliography and study on regression distribution on distribution (Optimal transport, Frechet regression)

Talks

- Soon : Seminaire IDESP December 2023
- Soon : Seminaire
- "Conférence IA et Santé", Nantes, 2022

Mines ParisTech,, Paris, France 2017

- Information system management
- Hardware and software architectures
- Introduction to artificial intelligence
- Image Processing

Mines Saint-Etienne, Saint-Etienne, France 2015-2017

- Majeur Data Sciences (Optimisation, Statistics,machine learning, R and Python coding)
- Options : Functional Equations and Geometry - High Performance Calculations - Image Processing

Université Jean Monnet,Saint-Etienne, France 2015
L3-Mathematiques in parallelle with engineering cursus

Lycée Louis Le Grand,Paris, France 2015-2013
*Prep school - MPSI-MP** (Maths, Physics and engeneering sciences)

Lycée Paul Hazard,Armentières, France 2013
Baccalauréat Scientific with honours

WORK EXPERIENCE

B12 Consulting - Louvain-La-Neuve, Belgium
Analyst developper 2020

- Data sciences' project (Python , Pandas, Numpy, Scikit-Learn)
- Back-end Development (Python - Django et Django REST) et Front - end (Typescript - React)

Engie - Louvain-La-Neuve, Belgium
Data Scientist Junior 2017 – 2019

- Internship's project : Study and detection of the wake effect on wind farms using data science algorithms
  - 1. Bibliographic research on the wake
  - 2. Exploration and analysis of data (weather and performance data on wind farm)
  - 3. Determination and implementation of a model
  - 4. Validation of the model / Tools used: Python, Pandas, Numpy, Scikit-Learn
- Data science projects - Studies of degradation rates of solar panels and inverters - Python Scikit-learn / Pandas
- Creation of an automation tool for downloading documents relating to calls for tenders - Python / Selenium

TEACHING

Teaching at university Algèbre Licence 1 (Espace vectoriel , applications linéaires)

- Algebra Licence 1 (vectorial space , linear applications)
- Probability for studient in life's science (Probability on finite univers, binomial, poisson, geomoetric distributions)
- Prépa polytech first year : Algebra (vectorial space , linear applications,matrix calculus, basis, Gauss ' pivot)
- Prépa polytech first year : Analysis (Riemann integrals over a segment $[a, b]$)

- Prépa polytech second year : Analysis (Numerical sequences and series, sequences and series of functions, power series, improper integral)

Academic support in a social center 4h30 per week (2021-2022) - 1h per week (2023)

SKILLS

- **Programming:** Python: Numpy, Pandas, ITK, Scikit-Learn. SQL, R,
- **Language:** French (Native)