FRANCE ROSE

Biomedical Data Scientist

CONTACT

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SKILLS

Coding (Python including tensorflow/pytorch, R, C++, Matlab, job scheduler)

Statistical learning algorithms (big data, deep learning)

Image analysis algorithms and tools

Team management

Scientific literature watch

LANGAGES

French, mothertongue

English, fluent (TOEFL 107/120)

German, B2 level

PERSONAL ACTIVITES

Mentoring high-school girls in coding (*codingsisters.fr*)

Music: opera singing , piano

Traveling and outdoor activities (hiking, biking, climbing)

During my studies at Ecole Normale Supérieure (ENS) and my research experiences, I developed interest in computational biology and the blooming field of machine learning. Today, strong of my past experiences in image and sensor data analysis, I would like to create innovative and adequate analysis solutions to Biological and Medical applications.

RESEARCH EXPERIENCE

2021-now | Post-doctoral researcher | University Hospital of Cologne, Germany
Deep learning for analysis of multiplexed tissue imaging and representation learning of animal behavior

2019-2021 | Biomedical Data scientist | MyndBlue (start-up), Paris
Detection and prediction of personal medical patterns for the follow-up of Major Depression and PTSD via deep learning.

> *Published article* "Enhancing human-machine teaming for medical prognosis through neural ordinary differential equations (NODEs)", Hum.-Intell. Syst.Integr., 2021**.**

2016-2019 | Ph.D Candidate | Institut de Biologie de l'ENS, Paris.
Analysis of Phenotypic and Spatial Cellular Heterogeneity from Large Scale Microscopy Data.

> *Published articles*
> "Compound Functional Prediction Using Multiple Unrelated Morphological Profiling Assays", SLAS Discovery, 2017.
> "PySpac*ell: A* Python Package for Spatial Analysis of Cell Images", Cytometry Part A, 2019.

2018 | Visiting researcher (4-months DAAD research fellowship) | EMBL, Heidelberg

2016 | R&D intern (5-months) | Keen Eye Techonologies (start-up), Paris
Development of an image analysis pipeline, compatible with the company web platform, to detec fluorescent RNA colocalization on mouse brain slices.

2015 | BioImage Analyst (6-months) | University of California at San Diego, USA
Image analysis pipeline development for caracterisation of intra-cellular parasites for a high-throughput screening platform.

2014 | BioImage Analyst (5-months Master 2 thesis) | Institut de Biologie de l'ENS, Paris
Computer vision algorithm development to study cell division orientation by live microscopy.

> *Published article* "Detection and tracking of overlapping cell nuclei for large scale mitosis analyses", BMC Bioinformatics, 2016.

ADDITIONAL EXPERIENCE

Teaching
2013-now | Tutoring and assitant teaching in Biology, Mathematics and Informatics for students from high-school to undergraduate programs.

Team management
2017-2018 | President of the PhD students association: organisation of a 200 people event, participation to general assemblees and decisions of the doctoral school.

2019-now | Founder and president of Coding Sisters: teaching programming to high-school girls and promoting gender equaliy in Tech.

EDUCATION

2016 - 2019   **Ph.D. in Computational Biology**
Institut de Biologie de l'ENS, Paris.

2019   **Graduation Certificate in Lyrical Singing**
Conservatoire Nadia et Lili Boulanger, Paris.

2011 - 2016   **ENS diploma in Biology, minor Physics**

2012 - 2014   **Master in Bioinformatics and Modelisation**
Highest honors (ranking 1/6). UPMC, Paris.