FRANCE **ROSE**
Biomedical Data Scientist

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
2023 | Visiting researcher (2-months) | Okinawa Institute of Science and Technology, Japan

> ***Published article*** *"LYN kinase programs stromal fibroblasts to facilitate leukemic survival via regulation of c-JUN and THBS1", Vom Stein et al. Nat. Comm., 2023.*

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 with Deep Learning.

> ***Published article*** *"Enhancing human-machine teaming for medical prognosis through neural ordinary differential equations (NODEs)", Fompeyrine et al. 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.
2018 | Visiting researcher (4-months DAAD research fellowship) | EMBL, Heidelberg

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

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 detect 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", Li & Rose et al. 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.** Fénelon and Saint Louis high-schools. Paris, France. Paris Science Lettres (PSL) University. Paris, France.

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 - 2023	Founder and president of Coding Sisters: teaching programming to high-school girls and promoting gender equaliy in Tech.

CONTACT

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50825 Köln, Germany

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)

FELLOWSHIPS AND PROGRAMS

2023 - 2025 **2-year KI-starter grant for young researchers**
Nordrhein-Westfalen, Germany

2022 **1-year IFS-Mentoring Program for International Female Scholars**
University of Cologne, Germany

2022 **5-week Quantitative Biology Summer Course "Neurophysics of Locomotion"**
KITP, UC Santa Barbara, USA

2018 **4-month DAAD fellowship for Ph.D. students**
EMBL, Heidelberg

ORAL PRESENTATIONS

2024 **"DISK — a Deep Learning method for missing skeleton data imputation in 2D and 3D"**
Measuring Behavior conference. Aberdeen, Scotland

"Spatial heterogeneity of cell responses in drug treatment."
2019 Young Researchers in Life Science conference. Paris, France
2018 Quantitative BioImaging conference. Göttingen, Germany

POSTERS

2018 **"Studying spatial heterogeneity of cell responses to cancer drugs"**
SLAS Advanced 3D Human Models and High-Content Analysis Conference. Leiden, Netherlands.

2017 **"Quantifying the heterogeneity of cell responses to cancer drugs.**
StatLearn meeting, French Society of Statistics (SFDS). Lyon, France
France BioImaging meeting. Paris, France.
Young Researchers in Life Science conference. Paris, France.

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.