Avraham ROSENBERG

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Education

2022-2023 **Master of Science (MSc)**, *École Normale Supérieure (ENS),* Paris, France
MVA (Mathematics, Vision and Learning) Statistical Learning, Convex optimisation, 3D computer vision, Object recognition , geometrical data analysis, medical imaging

2020-2023 **Master of Engineering (MEng)** , *ENSIIE- University of Paris-Saclay,* Évry, France
Applied mathematics: Statistical modeling, Regression methods, Data Analysis, Stochastic processes, Operational research, Analysis of partial differential equations

2020-2021 **Bachelor of mathematics** , *University of Paris-Saclay,* Évry, France
Probabilities, Statistics, Graph theory, Numerical analysis methods, Theory of measurement, Relational database design, Optimization

2017-2020 **Preparation for national competitive entrance exams leading to top French Engineering Schools**, *Lycée Kléber,* Strasbourg, France
MPSI/PSI*/MP*(in Paris)

2016-2017 **A-Level with highest honor**, *Lycée Lucien de Hirsch,* Paris, France

Work Experience

2023 **Data Scientist Consultant**, *Quantmetry - Part of Capgemini Invent, 6 months,* Paris, France
Mission at **Dassault Aviation**
○ Data preparation and data analysis (**Pyspark**, **Pandas**)
○ Implementation of statistical models (**Bayesian methods** for multilevel modeling)
○ Implementation of Machine Learning models (**Random Forest**, **LGBM**, **Bayesian Logistic Regression**)
○ Delivery of commented code with documentation
○ Facilitation and preparation of workshops for business teams
Internal R&D mission involving the comparison of various Transformer-based models for **time series forecasting**
○ Research and preparation of datasets (Transports and Energy) (**Pandas**, **Gluonts**, **Hugging Face**)
○ Implementation of several Deep Learning models based on Transformers (Autoformer, Informer, Temporal fusion transformation) (**PyTorch**, **Gluonts**)
○ Implementation of training and evaluation methods
○ Implementation of Machine Learning models (**LGBM**)
○ Configuration of multiple tracking tools (**MLflow**, **TensorBoard**)
○ Project configuration setup (**Hydra**)
○ Utilization of Git version control systems
○ Facilitation of internal meetings
○ Writing a blog article

2022 **Data Scientist Researcher**, *Cardiovascular Data Science (CarDS) Lab,* Yale-University, 4 months, New Haven, United-States
ECG signal analysis:
○ Implementation of Fourier analysis to process portable ECG signals and reduce noise (**Pandas, Neurokit, Scikit-learn, SciPy**)
○ Implementation of Deep Learning models for ECG classification (**Tensorflow, PyTorch**)
○ Technical presentations to medical teams

2021 **Data Scientist**, *Datascientest, 2 months,* Paris La Défense, France
○ Creation of exercises and course modules in Data Science and Machine Learning (**Pandas, Matplotlib, Seaborn, Scikit-learn**)
○ Creation of tests for various courses
○ Organizing a career workshop through video conferencing for learners
○ Writing three blog articles

2018	**Analyst**, *Galaxis Capital, 2 months*, London, United Kingdom

○ Analysis of real estate data from various regions in Great Britain
○ Analysis of the company's investment plan in different start-ups

Volunteer Experience

2021-2022	**President of the Data-Science and AI club**, Évry, France

Leading an association of 70 members.Setting up of formations and projects, organisation of conferences and participation in events (meetings and exhibitions)

2020-2021	**Treasurer and Project Manager in the Junior Entreprise Diese**, Évry, France

Management of the budget of a structure of 20 people. Tax and social declarations. Supervision of an accountant and a chartered accountant. Editing of invoices. Management of mathematical and computer projects.

2020-2023	**Secretary-General of the humanitarian association Keep Rising**, Paris, France

Help for the underprivileged and disabled individuals.

Projects

2022-2023	**Project with a doctor in neuropediatrics**, Necker Hospital , Paris, France

Analysis and implementation of AI tools in neuropediatrics for the spinal muscular atrophy

2022	**Research project**, ENSIIE , Évry, France

Solving NP-hard graph spanning problems using kernelization, linear programming and machine learning

2021-2022	**Project in a neurological department** , Hospital Center Sud Francilien, Corbeil-Essones, France

Project manager of a team of 3 people to improve a software to generate patient records

2017-2019	**Work on Brownian motion**, *Lycée Kléber*, Strasbourg, France

Experiments and code realization in Python in order to follow with an electronical microscope and to study the Brownian motion of a microscopic ball

2017-2019	**Supervised personal work on aeronautics**, *Lycée Lucien de Hirsch*, Paris, France

Mechanical approach to study how planes fly. Work with the Patrouille de France

Other Competences

Coding

I am proficient in the following technologies and tools: Python (NumPy, SciPy, Pandas, Matplotlib, Seaborn, Plotly, Scikit-learn, TensorFlow, PyTorch, GluonTS, Hugging Face Transformers, MLflow, TensorBoard, NeuroKit, OpenCV), R, PySpark, C/C++, SQL, Bash, AWS, Google Cloud Platform (GCP), PowerBI, and Google Analytics

Languages

French	Native	
English	C1	*3-month internship in the US and a 2-week intensive English course in Oxford*
Spanish	B2	

Honors & Hobbies

Reward	Medal of Excellence(2015, 2016, 2017)
Reward	Presentation at High School General Competitions (Mathematics and Physics)
Sport	Tennis competitions
Pilot	Flying lessons
Theater	Leading role in a theater play