CYRIANNE CHABERT

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EDUCATION

Columbia University: Columbia Engineering — New York, NY
MS in Mechanical Engineering — Sep 2025 – May 2026
Coursework: Biostatistics, Robotics, Robotics Studio, Data Science

Mines ParisTech - PSL University — Paris, FR
MEng in Applied Mathematics and Applied Physics, GPA: 3.75/4.00 — Sep 2023 – Oct 2027
Coursework: Optimization, Data Science, Probability, Signal Processing, Machine Learning
Seoul National University (#1 University South Korea): Exchange Student (courseworks in ML) — Feb 2025 – Jun 2025

College Stanislas — Paris, FR
Preparatory School PCSI/PSI*, GPA: 3.98/4.00 — Sep 2021 – Jul 2023
Intensive 2-year scientific program preparing for admission tests to top French engineering schools
Major in Physics and Mathematics; Minor in Computer Science and Engineering Sciences

EXPERIENCE & ACADEMIC PROJECTS

New York Genome Center (NYGC) — Sep 2025 – Present
Machine Learning Researcher — New York, NY
- Explored federated learning on biomedical data, testing 6+ hyperparameters
- Analyzed interdependencies and performance impact using fANOVA
- Ran large-scale experiments on the NYGC cluster with the Flower (flwr) framework

CBIO (bioinformatics laboratory Mines ParisTech) — Mar 2025 – Jun 2025
Bioinformatics Research Intern — Paris, FR
- Rebuilt the RSApred pipeline, resolving reproducibility issues and testing RNA redundancy with RNA-GLIB
- Designed RNA–ligand swapping experiments to probe model robustness, revealing reliance on ligand over RNA features
- Applied Python (pandas, NumPy), scikit-learn, and PyTorch to preprocess data, implement models, and evaluate predictions

Movement Analysis laboratory Hospital des Massues — Dec 2024 – Feb 2025
Biomechanics Research Intern — Lyon, FR
- Processed 10+ gait datasets in Python to support rehabilitation research in Virtual Reality
- Operated the Dive In Gait machine during rehabilitation sessions and clinical trials
- Utilized UNITY, BLENDER, C# and augmented reality to enhance walking performance

Mines ParisTech - Educative VR Game — Sep 2024 – Dec 2024
- Coordinated a 4-person team to design and develop a real-time 3D VR game for medical training, managing project scope, milestones, and integration of VR interactions
- Delivered a fully functional prototype using Unity and C#, demonstrated in academic settings to showcase immersive learning for surgical procedures

Quadruped Robot Design & Control Project — Sep 2025 – Present
Columbia University, Hod Lipson Robotics Laboratory — New York, NY
- Designed and modeled a four-legged robot in CAD, focusing on balance, load handling, and organic geometry
- Currently building and testing the first prototype leg using 3D-printed joints and motor integration
- Will next develop control algorithms for gait simulation and optimization using Raspberry Pi and Python

SKILLS

Programming	Python, C#, LaTeX, MATLAB
Python Packages	Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Flwr
Software & Tools	Unity, Blender, SolidWorks
Languages	French (Native), Spanish (Fluent)