

NAYEL BENABDESADOK

ENSAE Paris | École des Mines | SNU

Visit my portfolio: nayelsdk.github.io

✉ nayel.benabdesadok@ensae.fr

 [LinkedIn](#)

 [GitHub](#)

SUMMARY

Final-year dual-degree student at ENSAE Paris and École des Mines, seeking an internship as a Quant Researcher, Algo Trader or Pricing Structurer for May-June 2027.

SKILLS

Coding Python, C#, R, SQL, C, Conda

Languages French (Native), English - Spanish (Fluent), Japanese (Beginner)

EXPERIENCE

June – Dec 2025 **Quantitative Researcher Intern @ Natixis Corporate & Investment Banking** **Paris, France**

- Crafted a loan pricing model to monitor and mark-to-market Natixis' €100bn outstanding credit portfolio.
- Engineered a regression-based methodology to proxy CDS curves for illiquid, unquoted counterparties.
- Delivered the full pricing pipeline and curve-adjustment modules in C#, integrating advanced regression diagnostics to strengthen the desk's daily mark-to-market and decision-support tooling.

Mar – July 2026 **AI Engineer Intern @ Corpy&Co** **Tokyo, Japan**

- Shipped ML solutions for industrial clients, moving from early prototyping to full containerized production.
- Architected a hybrid OCR-VLM extraction pipeline to digitize Japanese logistics delivery slips, spanning text detection, semantic field extraction, and geometric matching of structured table data.

Dec - May 2025 **Research Assistant @ Milliman France** **Github - Paris, France**

- Explored a machine learning paradigm: Federated Learning applied to the insurance sector.
- Implemented federated regression models for automobile risk prediction and evaluation of the results.

June - Sept 2024 **Data Scientist Intern @ BPCE** **Paris, France**

- Developed Computer Vision algorithms to extract unstructured PDF data via OCR and object detection, increasing file-processing efficiency by 60% and saving managers 30 minutes a day.
- Designed NLP models to streamline financial document management via clustering and classification.

2022 - 2024 **Communications Officer @ Mines Études et Projets (University Consulting Firm)** **Saint-Étienne, France**

- Produced fortnightly editorial content that helped drive a €40k turnover over the 2024 mandate.
- Built the communication strategy for 500 students and managed all social-media channels & campaigns.

PROJECTS

Mar - July 2026 **Stochastic & ML Temperature Models for Weather Derivatives & Commodity Trading** **App Boreas**

- Modelled daily temperature for CME US cities with an Ornstein–Uhlenbeck process and ML forecasters.
- Priced HDD/CDD options by Monte Carlo and closed-form formulas, back-tested over 2020–2025.
- Deployed **Boreas**, an interactive dashboard pricing weather options live for commodity traders.

Winter Temperatures as a Driver of Natural-Gas Volatility **GitHub**

- Extracted short-/long-term gas factors via a Schwartz–Smith model fitted by Kalman on Henry Hub.
- Coupled temperature anomalies to gas volatility with a weather-driven GARCH-X, tested out-of-sample.

EDUCATION

2024 - 2027 **ENSAE Paris - Institut Polytechnique de Paris** **MEng in Computational Finance**

- Stochastic Calculus, Derivatives Pricing & Hedging, Interest Rate Models, Algo Trading
- Applied Statistical Learning, Advanced Machine Learning, Financial Econometrics

2023 - 2024 **Seoul National University (SNU)** **Exchange Year in Statistics & Computer Science**

- Numerical Optimization, Big Data Systems, Time Series Analysis, Mathematical Statistics
- Computer Vision and Image Processing, Natural Language Processing (NLP), Deep Learning

2022 - 2024 **Mines Saint-Étienne - Institut Mines-Télécom** **MEng in Computer Science**

- Applied Mathematics, Operational Research, Data Science, Physics Modelling for Energy Transition
- Bachelor's degree in Fundamental Mathematics (*Jean-Monnet University*)

2020 - 2022 **Collège Stanislas Paris** **"Classes Préparatoires" - PC (Maths & Physics)**

- Intensive program preparing for entrance to French engineering Grandes Écoles

OTHER

Sports : Swimming (6 years), Tennis (8 years), Badminton (1 year), Scuba Diving (PADI certification)

Trips : Algeria (Dual Nationality), Japan, South Korea, USA