

Axel Bröns

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Education

ECE Engineering School

Majoring Data & AI

Paris, France

Sept 2022 - Jun 2027

- Minor Research
- **Coursework:** Machine learning, Statistics, Advanced databases, Data science, Big Data Framework
- **Ranked:** 1st/135

Hanyang University

Semester abroad

Seoul, South Korea

Sept 2024 - Dec 2024

- **Coursework:** Numerical Analysis, Engineering Mathematics, UX & Usability, Korean, English writing
- GPA: 95 / 100

Experience

Algorithmic Trading Intern

L'Immobiliere De Reseau

Paris, France

June 2025 - Aug 2025

- Design, implementation, and testing of around 20 algorithmic trading strategies on cTrader using C#
- Optimization of strategy hyperparameters via cAlgo and PineScript, targeting a profit factor > 2.5
- Risk and return mathematical modeling using the Kelly criterion

Art & Tech

OMNES Education

San Francisco, CA

Jan 2024

- Creation of an artwork combining design and electronics
- Professional laser cutting, woodworking, advanced electronics

Projects

Detection of credit card fraud

[Github](#) 

- Machine learning project using an unbalanced dataset (99.17% / 0.83%)
- Using ensemble learning method (Stacking) and SMOTE method
- Finally using XGBoost and optimize with Bayesian optimization
- Model achieved 96.7% of Accuracy, 99% of ROC AUC and 88% of PR AUC

Neural Speech, real-time speech recognition

[Github](#) 

- Arduino DUE ARM Cortex-M3 Processor with limited memory
- Audio signal processing (FIR filter, MFCC)
- Neural network trained with TensorFlow with accuracy of 98.6%
- Autonomous embedded system (battery powered)

Skills & Interests

Technical: C++/C, Python, SQL, Java

Libraries: Scikit-learn, Tensorflow, Matplotlib, Seaborn, NumPy, Pandas

Tools: PowerBI, L^AT_EX, Jupyter, Conda, Arduino, Excel, Hadoop, Linux

Languages: French, English, Spanish, Korean

Interests: Chess, running