Louise Davy

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Education

LTCI - Télécom Paris - EDMH, Applied mathematics — Palaiseau (91), France
- Topic: Trade-off between performance and fairness in AI. — Nov 2024 – present

Institut Polytechnique de Paris, Data Science — Palaiseau (91), France
- Courses: Computer Vision, Representation Learning, Advanced AI for text and graphs, Responsible AI, Law and Ethics of Artificial Intelligence, ML Research Seminar, Structured Data: Learning and Prediction, Audio and Music Information Retrieval, Online Learning. — Sept 2023 – Sept 2024

ENSAI - École Nationale de la Statistique et de l'Analyse de l'Information, Data Science and Data Engineering — Bruz (35), France
- Courses: Machine and Deep Learning, Reinforcement Learning, NLP, Complex Networks, Distributed Systems, NoSQL and Cloud Technologies, Data-Ops, Software Engineering, Bayesian Statistics, Non-parametric Statistics, Statistical Tests, Unsupervised Learning, Time Series. — Sept 2019 – Dec 2022
- Erasmus exchange at Queen Mary University of London (United Kingdom): January to June 2021.

CPGE Lycée Victor et Hélène Basch & University of Rennes 1, Economics and Social Sciences (ENS D2 Paris-Saclay) — Rennes (35), France
- Courses: Mathematics, Macroeconomics, Microeconomics, General Studies, Management, Financial Accounting. — Sept 2017 – July 2019

Experience

LTCI - Télécom Paris, Research Intern (6 months) — Palaiseau (91), France
U-Statistics and sampling for facial recognition. — Apr 2024 – Oct 2024 — 7 months
- Topic: Sampling for the estimation of U-Statistics, applied to bias reduction in facial recognition.

Business & Décision, Junior Data Science Consultant (permanent contract) — Rennes (35), France
- Internal project: Built a voice assistant from scratch with Keras and Python, presented at the Salon de la Data in Nantes 2023. — Feb 2023 – Aug 2023 — 7 months
- Project for the Regional Council of Brittany: Developed a custom named-entity recognition system on a large text corpus with Spacy (Python). Containerization with Docker and WSL, database connection via Semarchy.

La Banque Postale, Intern (6 months) — Paris (75), France
Identification and reduction of biases in facial recognition. — Apr 2022 – Sept 2022 — 6 months
- Main project: Analysis of facial recognition algorithm results to extract biases with Python and Dataiku.
- Performed statistical tests and analyses to identify and eliminate variables potentially causing biases.
- Built a LightGBM machine learning model to correct the performance of the facial recognition algorithm.
- Additional project: Customer feedback analysis using LDA/NMF and zero/few-shot learning to classify verbatims (Scikit-Learn and Hugging Face).

Orange Cyberdefense, Intern (3 months) — Cesson (35), France
Deep learning for the detection of malicious user-agents. — June 2021 – Aug 2021 — 3 months

- Worked in a Big Data environment (tens of millions of logs per day): Hadoop, Spark (SparkSQL, MLlib), Zeppelin.
- NLP (Word2Vec), built a graph-based model (GraphX) and a neural network adapted to text analysis (Keras).

ENSAI, Intern (1 month) — Bruz (35), France
Data analysis on student profiles and end-of-study internships. — June 2020 – June 2020 — 1 month

- Described the evolution of internship topics over time with R.
- Used unsupervised methods to categorize ENSAI student profiles (PCA, MCA, K-Means clustering).

Skills

Programming Languages

Office

Dev-Ops

Machine Learning

Big Data

Platforms

Languages

French
Native speaker

English
C1 level — TOEIC score: 980 (2020)

German
B1 level — Goethe Institute (2015)