Alexis Biver

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Machine Learning Engineer with 6 years of experience in Deep Learning and Data Science.
I have innovated in domains such as Robotics, Voice Assistants and Data, from Proof of Concept to Deployment.
Curious and eager to learn, I'm passionate about delivering insights and improving processes through data.

CORE SKILLS

- **Tools & Deployment:** Python, PyTorch, Scikit-learn, NumPy, Pandas, Seaborn, SQL, Docker, CI/CD, Git
- **Machine Learning:** NLP (Embedding, Transformer, LLM), Finetuning, Regression Models, Diffusion Models
- **Data:** Data Analysis, Statistical Modeling, ETL, Feature Engineering, Data Visualization
- **Languages:** French (Native), English (Professional Working Proficiency)

PROFESSIONAL EXPERIENCE

Machine Learning Engineer   *Inria, Team Larsen/HuCeBot*
Nancy, Grand Est, France   Jan 2023 – Dec 2024 (2 years)

- Developed an open-source Python library for trajectory prediction in robotics, leveraging PyTorch and Scipy.
- Performed benchmarks and implementations of the State Of The Art solutions (MLPs, Transformers, Seq2Seq...)
- Preprocessed, analyzed and tuned multimodal sensor data (LIDAR, IMU, Cameras) to train predictive models.
- Supervised an internship leading to Python software allowing controls of a humanoid robot by voice using ROS.

Teaching Associate   *IUT Nancy-Charlemagne*
Nancy, Grand Est, France   March 2024 – June 2024 (1 semester)

- Delivered lectures and practical sessions on "Introduction to Network Services" for first-year IT students.
- Conducted Java-based exercises and evaluations to assess students' understanding.

Machine Learning Engineer   *Vivoka, R&D*
Metz, France   Sept 2019 – Jan 2023 (3 years, 4 months)

- Finetuned LLMs for classification tasks on edge devices using PyTorch and ONNX, with Python and C++.
- Developed Python APIs (SQL, FastAPI) to serve ML solutions and ensured production readiness with Docker.
- Enhanced data collection and processing to train robust NLP models for voice assistants (NLU and ASR).
- Conducted research, benchmarking, and technical popularization of scientific papers.

Data Analyst Developer (Internship)   *PwC Luxembourg, Data Services*
Luxembourg   March 2019 – Aug 2019 (6 months)

- Executed reporting and data visualization using ETL tools (SSIS and SQL) and Power BI.
- Updated data-mining solutions in C# and SQL to improve data aquisition processes.
- Researched and implemented a natural language understanding (NLU) approach for data augmentation.

EDUCATION

Master's in Natural Language Processing
Institut des sciences du Digital, Management et Cognition (IDMC)   2017–2019

Bachelor's in Mathematics and Computer Science
Université de Lorraine   2014–2017