Adegnon Vinove
Data Scientist

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French: Native **English**: B1 **Dutch**: A2

WORK EXPERIENCE

Macq **Evere, Belgium**

Data Scientist (Internship) **Jul 2023 – Sep 2023**

- Developed lightweight sound detection and classification algorithms for identifying gunshots in the surroundings area.
- Explored data augmentation techniques for improving the model's robustness.
- Integrated algorithms onto a low-power embedded device (Syntiant NDP120) using Python and PyTorch.
- Conducted proof-of-concept demonstrations and contributed to the deployment of the ML model on an improved Raspberry Pi using Linux.

Logiscool **Uccle, Belgium**

Professor (Student job) **Jan 2021 - Sep 2024**

Teaching coding skills to young learners.

- Guide young learners aged 8 to 17 in understanding coding using block-based programming language, Typescript and Python.
- Teaching students how to break down complex problems into manageable parts. Through guided exercises, games, and projects

EDUCATION

Université Libre de Bruxelles (ULB) **Brussels, Belgium**

Master's Degree in Computer Science **Sep 2024**

- Specialization in Computational Intelligence and Data Science

PROJECT EXPERIENCE

Automated summaries of long documents **2024**

- Collaborated with Energy Efficiency in Industrial Processes (EEIP) to research and develop advanced algorithms for automated summarization of large-scale and multi-document datasets using state-of-the-art Natural Language Processing (NLP) techniques.
- Fine-tuned and evaluated cutting-edge models (e.g., BART, GPT-3, C2F-FAR) for both extractive and abstractive text summarization, optimizing them for accuracy and efficiency in handling long-form content.
- Designed and implemented a robust pipeline using Python, Hugging Face's Transformers library, and Pytorch to preprocess, summarize, and refine long documents averaging over 10,000 words.
- Demonstrated benefits of combining extractive and abstractive model to get better results.
- More projects are available in my portfolio: Portfolio.

SNCB Cool Train - Anomaly Detection for Diesel Train Cooling Systems **2023**

- Developed an anomaly detection system for SNCB diesel trains using time-series data from engine cooling systems, processing over 1 million data points collected from 50+ trains.
- Implemented and compared multiple algorithms, including Isolation Forest, K-Means, DBSCAN, and fuzzy clustering, combined through a majority-vote system.
- The large dataset was enriched with external weather data (e.g., temperature, humidity) which resulted in a 5% boost in model accuracy
- Created a dynamic, interactive dashboard using Python and Plotly, enabling real-time visualization of anomalies and actionable insights based on weather conditions and time.

Bird Song Recognition **2022**

- Built a convolutional neural network model (CNN) to identify 10 Belgian/European bird species.
- Developed a random forest model and compared its performance with the neural network.
- Created an interactive interface to interact with the model. More information.

Skills

Generals

Python, R, Java, C/C++, JavaScript/HTML/CSS, SQL, PostgresSQL, Neo4j, Bash, Git, Docker.

Data Science/AI Focused

Spark, Sklearn/Scipy, Numpy, Pandas, PyTorch/Tensorflow, HuggingFace, Matplotlib/Seaborn, Flask/FastAPI, OpenCV