ARTHUR GAUTIER

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My projects: https://skowkyubu.github.io/

Data & AI Engineer, seeking opportunities in the field of data science, available in September 2024

WORK EXPERIENCE

Data Scientist – Covéa
January – July 2024

Niort, France / Internship

Covéa, a leading insurance company, launched a project to automate its electronic document management (EDM) system. As part of a team of five data scientists, I contributed to this large-scale project aimed at analyzing 72 million images representing 4 million customer files. My role focused on the ADR (Automatic Document Recognition) component, where I studied and developed open-source solutions as an alternative to the current managed service with the goal of reducing costs.

- Design and implementation of an ETL process for creating custom databases and training models.
- Development of an alternative to the current managed Custom Vision service using open-source models (YOLO) and Azure services.
- Challenging existing models for identity document recognition.
- Benchmarking the performance of the open-source model using different training datasets from the ETL process, with the goal of creating an optimal annotated dataset.

Results: YOLO model performance comparable to managed services (97% concordance on a production day, ~100,000 images). Significant cost reduction (64%) using open-source solutions. Next steps: deployment of the model in production services for industrialization.

Skills: Python – Git/GitHub – Cost optimization with a FinOps mindset – Big Data – Microsoft Azure – Databricks – Pyspark – Agile environment

AI Research Assistant - Bangkok University
May – July 2023

Bangkok, Thailand / Internship

Design of a demonstrator aimed at optimizing the management of food product sales: creation of a scanner capable of automatically detecting and identifying food items present on a meal tray from a photo taken by the scanner and displaying the corresponding price.

- Creation of a database through web scraping, photo capturing and annotation (with Roboflow).
- Development of an image augmentation program to enrich the database.
- Use of Google Colab for training the deep learning model (YOLOv8).
- Implementation of an intuitive user interface for result visualization.
- Deployment of the model on Raspberry Pi for field use by connecting the model to a camera.
- Creation of a full-size scanner prototype with a 3D printed camera mount and LED lighting.

Skills: Python, Computer Vision, OpenCV, 3D, Web Scraping, Raspberry Pi, Google Colab

EDUCATION

Bergen University
August – December 2023

Bergen, Norway / Academic Exchange

- Machine Learning (Random Forest, SVM, PCA, KNN…), Information Theory, Concurrent programming, Norwegian language. Class in English.
- Notable Project: Implementation of a decision tree (see project).

SeaTech, School of Engineering
2021-2024

Toulon, France

- Engineering M.Sc. in Data Science & Processing and Information Systems.
- Notable Projects: Digital Chessboard Transcription via Photography (see project). 'Garden Simulator' Video Game in C++ (see project).

Preparatory Class, Descartes
2019-2021

Tours, France

- Intensive pre-Engineering preparation course for entrance into elite engineering schools. MPSI-MP (Mathematics, Physics) curriculum.
- Project: Fire Evacuation Simulation and Optimized Exit Placement Research (see project).

INFORMATION

Programming languages: Python, MATLAB, C++, SQL, PySpark
Cloud Platforms/Services: Microsoft Azure, Databricks, Google Colab
Languages: English (Fluent) – French (Native) – Spanish (Elementary)
Hobbies and Interests: Running: 400/800m competition, marathon (Strava) – Cinema and music (SensCritique).