Abdoulaye SAYOUTI SOULEYMANE
R&D Artificial Intelligence Engineer at Aiway

https://abdoulaye-sayouti.github.io/

Profil

Innovative R&D AI Engineer with 3+ years of expertise in developing cutting-edge ML/DL models and pioneering 3D data processing solutions. Experienced in creating effective AI solutions that have contributed to improved product quality and operational efficiency for the companies.

Work Experience

Aiway
Aix-en-Provence, France
Oct. 2022 - Present

▸ R&D Artificial Intelligence Engineer

At Aiway, I lead the development, training, and evaluation of 3D AI models for oral scan segmentation and optimization. These models are the cornerstone of **EASYMODEL** (**www.ai4dental.com**), a cutting-edge SaaS platform for orthodontic model creation, serving dentists and orthodontists worldwide.

Key responsibilities :

❖ *Process Optimization:* Streamlining data preparation, training, and evaluation workflows to enhance model performance and align with client needs.

❖ *Data Curation:* Implementing advanced 3D data annotation strategies to significantly boost model accuracy.

❖ *Model Development:* Training and evaluation of 3D semantic segmentation models for various dental applications, ensuring they meet precise client specifications.

Enedis AI Lab
Marseille, France
Jun. 2021 - Sept. 2022

▸ R&D Artificial Intelligence Engineer

At Enedis AI Lab, I designed and implemented AI solutions for energy data analysis and natural language processing, automating critical processes in the energy sector.

Key responsibilities :

❖ *Data Processing and Analysis:* Engineered custom NER datasets and processed electrical load curve data for actionable insights.

❖ *Models Development:* Trained and optimized various NLP models, including text classification and NER, with a focus on zero-shot learning to reduce operational costs.

❖ *Deployment and Accessibility:* Deployed containerized models and built user-friendly web interfaces, enhancing AI accessibility.

Infineon Technologies
Padova, Italy
May-Sept. 2020

▸ Data Analyst Intern

❖ *Dashboard Development:* Designed and developed a dashboard for real-time visualization and validation of the company's software, firmware and hardware development processes, in compliance with ISO 26262 "Road vehicles - Functional safety" and Automotive SPICE standards.

Projects *(Details in my online portfolio)*

❖ *AI Fashion Innovation:* Trained a specialized AI model for African fashion, under the Inclusive Fashion AI (InFashAI) initiative. Fine-tuned Stable Diffusion v1.4 with over 100,000 images, most through web scraping to boost African fashion representation.

❖ *AI Chatbot:* Collaborated in developing a humanoid-robot dialogue interface for NAO and Pepper robots, using RASA and machine learning for tasks like scheduling and social interactions.

❖ *Educational App Development:* Developed a JavaFX desktop application, to teach the Traveling Salesman Problem to children through interactive visualization, adhering to the Model View Controller (MVC) pattern.

Education

❖ **M.Sc in Artificial Intelligence, Avignon**
Avignon, France
2020-2022
▸ Center for Education and Research in Computer Science (CERI)

❖ **M.Sc in ICT for Internet and Multimedia (ERASMUS+ Mobility)**
Padova, Italy
2019-2020
▸ University of Padova, Italy

❖ **Engineer in Telecommunications**
Tunis, Tunisia
2017-2020
▸ Higher School of Communication of Tunis, University of Carthage

Paper & Certifications

❖ HAPe: Optimizing Customer Relation by Automatic Task Distribution using Constrained Optimization and Natural Language Processing **(CIRED 2023 - Enedis)**
Aug. 2023

❖ Mathematics For Machine Learning Specialization **(Coursera)**
Nov. 2020

❖ Neural Network and Deep Learning **(Coursera)**
Nov. 2019

Personal Info

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https://github.com/Abdoulaye-Sayouti

https://www.linkedin.com/in/sayouti-souleymane-abdoulaye/

Industries

▸ Telecommunications.
▸ Electricity.
▸ Building information modeling (BIM).
▸ Dental.
▸ Semiconductor.

Skills

◉ **Programming Languages**
Python, C, C++, Java, JavaScript, PHP

◉ **Machine & Deep Learning**
Scikit-Learn, PyTorch, TensorFlow, Transformers, Vertex AI (GCP)

◉ **NLP**
RegEx, LlamaIndex, LangChain, LangGraph, Prompt Engineering

◉ **Data Processing**
▸ *3D:* Open3D, PyTorch3D, MeshLab, IfcOpenShell
▸ *General:* NumPy, Pandas, Hadoop, Talend

◉ **Databases**
MySQL, PostgreSQL, Elasticsearch

◉ **Data Visualization**
Tableau, Kibana, Dash

◉ **Cloud, DevOps & MLOps**
Docker, GitLab, Jenkins, MLflow, Cloud Storage & Dataflow (GCP)

◉ **Web Development**
Flask, ReactJS, Node.js

Languages

❖ **French** (Fluent)

❖ **English** (B2)