Christian **NGUIEPE SEGNOU**

Data Scientist, Trainer

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Portfolio : https://chrisdmi.github.io/Portfolio-christian-segnou-2023/

Introduction

Holding a Ph.D. in materials science, my thesis highlighted the significant use of Python for image processing and data analysis. With this expertise, I shared my knowledge of Python by teaching bachelor's level students at the University of Paris-Saclay for two years. Passionate about new technologies, I transitioned to artificial intelligence and data science. This shift was solidified through training that heightened my awareness in the fields of computer vision, natural language processing (NLP), data engineering, and MLOPS practices, which are now at the core of my professional interests..

Skills & Technical Environments

Data Science, Data Analyse, Data Engineering

Python, PySpark, SQL, Git CI/CD, Docker, MongoDB, Kubernetess, Kubeflow, MLFlow, Airflow, Linux, HTML/CSS, Scrapy, Streamlit, FastApi, Pytorch, Tensorflow, AWS

Education & Degrees

Year	Degrees	Formation	Speciality
2023	**Doctorat**	Université de Paris-Saclay	Sciences des Matériaux
2023	**RNCP de niveau 6**	Jedha	Concepteur Developpeur en Science des Données
Languages	**French (Native speaker), English (Professional)**		

Certifications

- **Concepteur Developpeur en Science des Données** – https://www.credential.net/8ae1ca89-eab2-44a6-9bed-98fe27562a77#gs.5fw763
- **Hands-on to Linux Commands and Shell Scripting** - https://coursera.org/verify/AUH4LGP2NCT4
- **Relational Databases (RDBMS) Essentials** - https://www.credly.com/badges/4ae1e959-dbfd-4518-9178-73cea91b9edf/linked_in_profile
- **Introduction to Relational Databases (RDBMS)** - https://coursera.org/verify/2B8WSU3F7V74
- **Relational Database Administration (DBA)** - https://coursera.org/verif y/MSBMTEKGBTHC
- **Databases and SQL for Data Science with Python** - https://coursera.org/verify/8EGZSDB8QRK3
- **Data Engineering Essentials** - https://www.credly.com/badges/2c1c40e5-8e58-4cbd-bb61-fc0cf2d975ee/linked_in_profile
- **Introduction to Data Engineering** - https://coursera.org/verify/WKEGFMRJXYBK
- **Python for Data Science, AI & Development -** https://www.coursera.org/account/accomplishments/verify/FFK2VE8FG4QN
- **Python Project for Data Engineering** - https://coursera.org/verify/BG8EXTHBUBSP
- **ETL and Data Pipelines with Shell, Airflow and Kafka** - https://coursera.org/verify/ZWPY485NAFQH
- **HTML, CSS, and Javascript for Web Developers -** https://www.coursera.org/account/accomplishments/verify/3MFJVEVM8SX7

Professional Experience

03/2024 –	Freelance Trainer at Abilycare
Role	**Trainer in Machine Learning**
Project	Data skills training for non-specialist employees
Responsabilities	- Preparation and delivery of theoretical and practical courses, practical work (TP), and exercises in applied statistics for data science. - Teaching data preprocessing techniques to optimize analysis and utilization. - Training in supervised and unsupervised machine learning, providing a deep understanding of predictive and classification models. - Introduction to the fundamentals of deep learning, with concrete applications in computer vision (CV) and natural language processing (NLP).
Technical Environment	Python, Jupyter Notebook, Discord, Vulgarisation, Pédagogie

09/2023 –	Expleo Group – Montigny-le-Bretonneux
Role	**Data Scientist R&D**
Project	Repair Smart: Extraction and Analysis of information in Airbus PDF documents
Responsabilities	- Developed a YOLO model for detecting areas of interest in PDF files. - Code refactoring to ease the use of the FasterRCNN model. - Pé-traitement des crops et application d'un modèle OCR pour la reconnaissance de texte - Pre-processing of image crops and application of an OCR model for text recognition. - Developed an application to provide access to the model. - Developed and integrated a chatbot connected to a Large Language Model (LLM) to provide a dynamic Q&A system based on PDF content.
Challenges	- Management of the diversity of patterns in the documents, requiring the development of flexible analysis methods capable of adapting to various formats and data structures. - Challenge of recognizing handwritten information, involving the implementation and optimization of advanced optical character recognition (OCR) tools to ensure precise extraction of handwritten data.
Technical Environment	Python, PyTorch, YOLO, FasterRCNN opencv, Pytesseract, Kubeflow, Git, LLM, Langchain

Role	**Data Scientist R&D**
Project	Automation and Optimization, using AI, of Equipment Management for the Logistics Department
Responsabilities	- Developed a YOLO model for detecting areas of interest in PDF files. - Pre-processing of image crops for text recognition. - Applied an OCR model for text recognition. - Developed an application to make the model accessible. - Created and populated a database with the analyzed data from PDF files. - Constructed and deployed an application to provide access to the model.
Challenges	- Ensuring the accuracy of extracted information, critical for equipment inventory integrity and compliance with return procedures. - Rapid implementation of an automated solution integrated into existing processes to meet the urgent needs of the logistics department.
Technical Environment	Python, PyTorch, YOLO, opencv, Pytesseract, Kubeflow, Git, Docker, Streamlit, deployment

09/2019 – 09/2021, 2 ans	Université de Paris-Saclay - Orsay
Role	**Python Teacher**
Project	Responsible for preparing and delivering courses to students from levels L1 to L3 on Python programming and introductory concepts of machine learning and deep learning.
Responsabilities	- Development and facilitation of interactive courses. - Support for students in their end-of-course projects. - Assessment of student progress and providing constructive feedback to enhance their understanding.
Technical Environment	Python, Simplification, Pedagogy

10/2018 – 06/2023, 5 ans	Centre de Nanosciences et de Nanotechnologie - Palaiseau
Role	**Phd Candidate**
Project	Project Lead – Understanding the dynamics of magnetic domain wall motion to improve hard drives.
Responsabilities	- Image processing from magneto-optical Kerr microscopy. - Data analysis from measuring the movement of magnetic domain walls. - Mathematical modeling of the dynamics of a domain wall. - Machine learning prediction of domain wall velocities.
Technical Environment	Python, Scikit-Learn, Pandas, opencv, ImageJ, Git, Numpy, Scipy, Matplotlib, Sympy