

# DAVID CHEN

## CONTACT INFOS

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## EDUCATION

**Engineering Degree, Master level degree in Computer Science**  
École supérieure d'informatique, électronique, automatique (ESIEA)  
majoring in Artificial Intelligence and Data, (2019-2024)

### Study Abroad Exchange Semester

Wrexham Glyndwr University, United Kingdoms (2021-2022)

## SKILLS

### Technical skills:

- **Programming languages**
  - Python (Pytorch, Tensorflow, Plotly Dash, Pandas, Pyspark ...)
  - Java (Spring Boot)
  - JavaScript (Angular)
  - R
- **Database**
  - SQL (PostgreSQL)
- **Tools and technologies**
  - Docker
  - Git
  - Kafka
  - Tableau

### Certifications:

- « **Data Analysis with Python** », freeCodeCamp, December 2022
- « **JavaScript Algorithms and Data Structures** », freeCodeCamp, May 2023
- « **Relationnal Database** », freeCodeCamp, 03/2025

### Professional qualities:

- Team player
- Autonomous and proactive
- Rigorous and detail-oriented
- Honest and resourceful

## LANGUAGES

- French: native
- English: fluent (TOEIC 980, equivalent C1 CEFR level)

## EXPERIENCES

### May 2025 – Present

Tools: Python, Java, Kafka, Spark, PostgreSQL, Elasticsearch, Flask, Angular, Docker, Kibana, Spring Boot

### Personal Project

*Implementation of a Microservices Architecture for Real-Time Banking Fraud Detection*

- **Designed and implemented a microservices architecture for real-time banking fraud detection** (dataset IEEE-CIS Fraud Detection, Kaggle).
- **Generated synthetic banking transaction streams via a containerized Flask application.**
- Managed **storage and partitioning** of data with **PostgreSQL**.
- **Deployed a Kafka architecture** (Confluent All-in-One): **topics, JDBC connectors, and streaming pipelines.**
- **Trained and ensembled (stacked) ML models** for fraud scoring.
- **Processed real-time streams with Apache Spark** and ML scoring.
- **Developed a REST API (Swagger)** for communication between services.
- **Developed an interactive Angular dashboard** to visualize alerts.
- **Integrated Elasticsearch and Kibana** for advanced search and analytics.

### February 2024 - August 2024

Tools: Java, Spring Boot, Kafka, Git, Scrum, JUnit, Mockito

### Internship - Artik Consulting

*Consultant for Colissimo for the project "Webhook"*

- **Internal training on Angular** (front-end), **Spring Boot** (back-end), **Kafka & Spark** (data processing), **Elasticsearch & Kibana** (analysis & visualization)
- **Participated in drafting a call for tenders response** for the ESCP, a French business school with Artik Consulting.
- **Onboarding into Squad 1** on the "Webhook" project, a **real-time parcel tracking system** using webhooks, allowing status updates **without direct server requests.**
- **An existing MVP already reduced daily API calls by 70%** (from 5.9M to 1.7M).
- **I contributed to the project overhaul** with the migration to **Spring Boot**
- Implemented **message mapping** for multiple Kafka topics.
- **Developed and integrated new back-end API features.**
- **Participated in daily Scrum meetings**
- **Wrote unit and integration tests with JUnit 5 and Mockito.**

### September 2023 – February 2024

Tools: Python, PyTorch, Sklearn, Tensorflow, Plotly Dash, Git

### Research Project - Learning Data & Robotics, ESIEA

*Affective Computing: Classifying Unconventional Emotions*

- The project aimed to **develop a solution for classifying emotions** incrementally.
- **Wrote a state of the art review on incremental learning and active learning.**
- **Developed a semi-automatic annotation tool** to accelerate **dataset creation.**
- **Designed and implemented incremental models** (classes and data).
- **Experimented with the CFEE dataset** (Compound Facial Expressions of Emotion) to **classify complex emotions.**

### May 2023 - September 2023

Tools: Python, Plotly Dash, Git

### Internship - Technilog

*Prototyping of a web application demonstrating ML models*

- **Contributed to the development** of a **webapp** designed to showcase new features of Technilog's solutions.
- **Developed core functionalities** within the application:
  - Implemented **variable forecasting features** (predicting **future sensor values**).
  - **Designed an impact analysis module** to study **relationships and influences** between system variables.
  - **Developed an anomaly detection module** based on an **autoencoder** and **reconstruction error.**
  - **Improved user experience: authentication and model updates.**