



Sylvain Delahaies

Data Science | Data Engineering



In brief

After more than ten years of applied and fundamental research in Mathematics and Data Assimilation, I decided to operate a slight career shift to embrace the AI revolution. Starting with an intensive self-training in Machine Learning and Deep Learning, I then joined DataScientest to train as a Data Engineer to fulfill my potential.

My goal: to design, implement and deploy AI solutions.

In practice

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🌐 Website: sdelahaies.github.io

in sylvaindelahaies

📍 Condat-sur-Vézère, Dordogne, FR

💼 partial/full-remote working

Languages

🇫🇷 French - Mother tongue

🇬🇧 English - professional proficiency

🇩🇪 German - Notions

Education

- **PhD 2005-2008**
Contact and Complex structures in Geophysical Fluid Dynamics
University of Surrey
- **MSc 2004-2005**
Hydro-Informatics
University of Surrey
- **MSc 1999-2004**
Mathématiques et Applications
Université d'Angers

Interests

- City council
- Computing
- Sciences
- Linux
- Technologies
- craft building
- Piano, Guitar
- Hiking
- Lutherie
- Heritage

SKILLS

Math & Data Science

- Geophysical Fluid dynamics
- Data analysis & visualisation
- Data assimilation
- Machine Learning
- Computer Vision
- Natural Language Processing
- Reinforcement Learning
- Recommendation System

Databases

- SQL & NOSQL
- MongoDB
- ElasticSearch
- Neo4j

Big Data

- Java Spark
- Pyspark
- Hadoop Hive
- Kafka

Development

- Fastapi
- Flask
- Dash
- Streamlit

Languages & Tools

- python, bash, ~~EL~~X, Git, Matlab
- pytorch, tensorflow, sklearn
- VS code, jupyter, Android Studio

Isolation & Orchestration

- Docker
- Kubernetes
- Airflow

TRAINING

Data Engineer

2023

Datascientest Diploma certified by les MINES ParisTech- full-remote
Programming, Databases, Machine learning, Big Data, Streaming, Automation, Deployment, Devops.

Project: Development of a travel planning App with POI recommendation: design, implementation, deployment.

EXPERIENCE

Visiting Research Fellow

2020-present

University of Surrey - full-remote

Guildford, UK

- **data Science/Engineering:** Online training for temporal point processes using pytorch and kafka.

Post-doctoral Research Assistant

2009-2020

University of Surrey - full-remote

Guildford, UK

★ Data Assimilation and Stochastic Point Processes

- **Data science:** development of Bayesian filters to analyse and model crime, social and neural networks, Covid19 outbreak...
- **Machine learning:** insurance risks associated with land subsidence.
- **Data viz:** development of a flask/dash web app to monitor the evolution of the Covid19 outbreak.

★ Data Assimilation and Terrestrial Ecosystems

- Development of variational methods for the analysis of the Carbon cycle for terrestrial ecosystems.
- Study of very high resolution satellite imagery together with a terrestrial ecosystem Carbon cycle model to monitor and detect forest degradation.
- Development of variational tools to evaluate the information content of different observation fluxes in Carbon cycle models.
- Development of a matlab interface to analyse the sensitivity for Carbon cycle models.

★ **Teaching:** Numerical solutions for PDEs

2011-2012

★ **Communication:** publications, posters, conferences, seminars.