



## Postdoctoral Position : Can Data Science help estimate catalyst lifespan ?

If you wish to evolve in a challenging technical environment, if you are an expert in Data Science, if you are autonomous and you have a real capacity to tackle a major technical issue in chemical engineering, then this job is for you!

### Job description

IFP Energies nouvelles is a public-sector research, innovation and training center active in the fields of energy, transport and the environment.

Model development for (bio) chemical industry has received a great amount of attention by the scientific community over the past decades. IFPEN is a key contributor in this field. It has developed several simulation software which contributes to the development of the technological solutions required by the refining industry. The main problem to tackle is to estimate lifespan catalyst.

The objective of the post doc is to use data science method (time series forecasting...) in order to estimate lifespan with confidence interval. Packages coming from DataScience community (Prophet, forecast, tseries ...) will be tested and improved.

The development will be realized in R or Python.

### Qualifications

Application-driven candidates with a computational background (PhD) are encouraged to apply. The candidate will work in a stimulating, interdisciplinary environment (analysis, process engineering, applied mathematics...) at IFP Energies Nouvelles (France).

#### Required Skills and Experience

- Degree in Process System Engineering, Bioinformatics, Data Mining/Data Science or Computer Science
- Data Science, Parameters Tuning, Optimization, Numerical Analysis
- Chemical reactions modeling (mechanism description, thermodynamics, kinetics)
- Programming languages : Python, R
- Motivation to work in a trans disciplinary team (experimentation and the main analytical techniques associated)
- English skills
- Good listening skills, rigorous and pragmatic
- Good communication skills, oral and written

### Location

IFP Energies Nouvelles  
Process Division  
BP3 - Rond point de l'échangeur de Solaize  
69360 Solaize. France

### Contact

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### Informations

Desired duration: 12 months  
Desired period: 2018-2019  
Location: IFP Energies Nouvelles - Lyon  
Application: Please send your application (CV, cover letter, Statement of Research Interests, References) to [benoit.celse@ifpen.fr](mailto:benoit.celse@ifpen.fr) or [Denis.guillaume@ifpen.fr](mailto:Denis.guillaume@ifpen.fr)