



## 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 motivated to tackle a major technical issue in chemical engineering, this job is for you!

### Job description

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

Model development for (bio) chemical processes 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 tools which contribute to the development of technological solutions for more energy efficient and environmentally friendly refining processes. One of the main bottlenecks for further improvements is the reliable estimation of the catalyst lifespan.

The objective of the post doc is to investigate and evaluate different data science methods (time series forecasting...) in order to estimate the catalyst lifespan with confidence intervals. A large database of more than 100 000 points is available. Packages coming from the data science community (Prophet, forecast, tseries ...) will be tested and improved.

The research work is expected to give rise to publications in scientific journals.

The development will be realized in R or Python.

### Qualifications

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

#### Required Skills and Experience

- PhD in relevant field (Process System Engineering, Bioinformatics, Data Mining/Data Science or Computer Science)
- Data science, parameter tuning, optimization, numerical analysis
- Programming languages: Python, R
- Proficiency in English
- Good listening skills, rigorous and pragmatic
- Good communication skills, oral and written

### Location

IFP Energies nouvelles  
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)