# Article information:

Prognostics for state of health estimation of lithium-ion batteries based on combination Gaussian process functional regression - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0026271413000747>

# Article summary:

1. This article discusses the prognostics for state of health estimation of lithium-ion batteries based on a combination Gaussian process functional regression.

2. The article outlines two main methods for calculating the SOH of batteries, and explains the regeneration phenomenon in battery degradation.

3. It also introduces Gaussian process regression and its transformations, such as Approximate Gaussian Process Regression (AGPR), Online Sparse Matrix Gaussian Process Regression (OSMGPR), and Gaussian Process Dynamic Model (GPDM).

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides an overview of the prognostics for state of health estimation of lithium-ion batteries based on a combination Gaussian process functional regression. The article is well-researched and provides detailed information about the two main methods for calculating the SOH of batteries, as well as an explanation of the regeneration phenomenon in battery degradation. Additionally, it introduces various transformations to the basic GPR model, such as AGPR, OSMGPR, and GPDM.

However, there are some potential biases that should be noted in this article. For example, while it does provide an overview of related studies in this field, it does not explore any counterarguments or present both sides equally. Additionally, there is no mention of possible risks associated with using these methods for prognostics or any discussion about how to mitigate those risks. Furthermore, there is no evidence provided to support some of the claims made in the article.

In conclusion, while this article provides a comprehensive overview of prognostics for state of health estimation of lithium-ion batteries based on a combination Gaussian process functional regression, there are some potential biases that should be taken into consideration when evaluating its trustworthiness and reliability.

# Topics for further research:

* Lithium-ion battery prognostics
* Risk assessment for prognostics
* Mitigation strategies for prognostics
* Counterarguments for prognostics
* Evidence-based prognostics
* Gaussian process functional regression applications

# Report location:

<https://www.fullpicture.app/item/df7122d0848679cc9a219f258a692bec>