# Article information:

【Dynamic System】从时间序列到数据驱动 - 知乎  
<https://zhuanlan.zhihu.com/p/503149780>

# Article summary:

1. Introduction of Behavior System Theory, a new analysis method for dynamic systems from the perspective of time series.

2. Explanation of kernel representation and properties of linear time-invariant systems.

3. Introduction to Foundational Lemma, which builds a bridge between data and model by establishing conditions for persistent excitation.

# 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 provides an introduction to Behavior System Theory, a relatively new analysis method for dynamic systems from the perspective of time series. The article explains the concept of kernel representation and properties of linear time-invariant systems in detail, as well as introducing Foundational Lemma which builds a bridge between data and model by establishing conditions for persistent excitation.

The article is generally reliable and trustworthy, providing detailed explanations on the concepts discussed with relevant examples to illustrate them. The article also provides references to further reading on the topics discussed, allowing readers to explore more in-depth information if desired.

However, there are some potential biases in the article that should be noted. For example, while the article does provide an overview of Behavior System Theory and its applications in data-driven control theory, it does not discuss any potential drawbacks or limitations associated with this approach or other alternative approaches that could be used instead. Additionally, while the article does provide references for further reading on related topics, it does not provide any external sources or evidence to support its claims or conclusions made throughout the text.

# Topics for further research:

* Behavior System Theory limitations
* Alternative approaches to data-driven control theory
* Kernel representation applications
* Foundational Lemma conditions
* Linear time-invariant systems analysis
* Persistent excitation data analysis

# Report location:

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