# Article information:

Using machine learning algorithms to predict occupants’ thermal comfort in naturally ventilated residential buildings - ScienceDirect  
<https://www-sciencedirect-com.ezproxy.cityu.edu.hk/science/article/pii/S0378778819314653?casa_token=VMdXNk7t8B0AAAAA%3AAnWVX9zbHBWrLMu4CDbjPqJt4SGy1V3J0njxKjETgiODpKmJFsRUh-QIwWUie-3fiwoT8uE9>

# Article summary:

1. Thermal comfort is important for occupants' productivity and quality of life, as well as building energy consumption.

2. The Predicted Mean Vote (PMV) model is widely used to predict thermal comfort, but it is not very effective in naturally ventilated buildings.

3. Modified models, such as the extended PMV (ePMV) and adaptive PMV (aPMV), have been proposed to improve prediction accuracy in naturally ventilated buildings, but determining the expected factor or adaptive coefficient can be challenging.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章主要介绍了使用机器学习算法来预测自然通风住宅建筑中居民的热舒适度。文章提到，热舒适度对于居民的生产力和生活质量有着重要影响，同时也对建筑能源消耗产生巨大影响。因此，准确评估居民的热舒适度是维持舒适的热环境和节约能源的关键。

然而，该文章存在一些潜在偏见和不足之处。首先，文章没有充分探讨PMV模型在自然通风建筑中的局限性，并未提供其他可能有效的方法。其次，文章只提到了机器学习算法可以用于预测热舒适度，但并未详细说明如何应用这些算法以及其优缺点。此外，文章没有考虑到可能存在的数据偏差或样本不足等问题。

另外，该文章还存在一些片面报道和缺失考虑点。例如，在介绍PMV模型时，并未提及该模型是否已经得到广泛应用和验证；在介绍机器学习算法时，并未提及其可能存在的局限性和风险。

总之，该文章需要更加全面地探讨热舒适度预测的方法和应用，同时也需要更加客观地呈现双方的观点和可能存在的风险。

# Topics for further research:

* Limitations of PMV model in natural ventilation buildings
* Alternative methods for assessing thermal comfort
* Application and limitations of machine learning algorithms for predicting thermal comfort
* Potential biases and sample size issues in the study
* Verification and widespread use of PMV model
* Risks and limitations of machine learning algorithms

# Report location:

<https://www.fullpicture.app/item/78760cdeafdb31d4d0ecb985167605cf>