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Survey of Related Field for Artificial Intelligence Window Development

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Abstract : To develop an artificial intelligence based automatic ventilation system, recent research trends were analyzed and analyzed. This research method is as follows. In the field of architecture and window technology, the use of artificial intelligence, the existing study of machine learning model and the theoretical review of the literature were carried out. This paper collected journals such as Journal of Energy and Buildings, Journal of Renewable and Sustainable Energy Reviews, and articles published on Web-sites. The following keywords were searched for articles from 2000 to 2016. We searched for the above keywords mainly in the title, keyword, and abstract. As a result, the global artificial intelligence market is expected to grow at a CAGR of 14.0% from USD127bn in 2015 to USD165bn in 2017. Start-up investments in artificial intelligence increased from the US $ 45 million in 2010 to the US $ 310 million in 2015, and the number of investments increased from 6 to 54. Although AI is making efforts to advance to advanced countries, the level of technology is still in its infant stage. Especially in the field of architecture, artificial intelligence (AI) is very rare. Based on the data of this study, it is expected that the application of artificial intelligence and the application of architectural field will be revitalized through the activation of artificial intelligence in the field of architecture and window.

Keywords : artificial intelligence, window, fine dust, thermal comfort, ventilation system
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