**Recommender Engine Design Document**

Created by: Mohit, Date: 07/11/2020

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| **Target Release** | - | **Background**  Suppose that the user does not only want to know when the indoor air quality and thermal indexes go out of range of acceptable healthy ambience limits but also wants the information in advance to avoid such out of bound indexes in the first place.  The recommender engine chooses appropriate learning paradigms (machine learning models, support vector machines etc.) to perform estimation of the future of the indoor air quality and thermal ambience by studying the present and the past. Furthermore, based on the output of the learning models it then sends out alerts and potentially recommends appropriate action. |
| Document Owner | Mohit |
| Engineer/Developer | Mohit |
| QA | Mohit, Jean-Francois |
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**Feature requirements**

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| **#** | **Title** | **Feature Description** | **Priority** | **Notes** |
| 1 | Learning Models | 1. Time series analysis engine 2. Machine learning models (future) 3. Support vector machines (future) | Must Have | * In collaboration with backend engineers who will integrate it into the app. |
| 2 | Recommendations: Warnings | The output of the learning models are mapped with appropriate warnings. | Must Have | * Input from Sina and JF to design the warnings and their messaging for the users |
| 3 | Recommendations: (Potential) User Actions | The appropriate warnings based on the output of the learning models are mapped to potential recommendations for the user to take appropriate action | Should Have | * Input from Sina dn JF to design the recommendations for user actions |