What are your takeaways for designing an algorithm that you learned from the article? Are there practices that the article mentioned that you would like to use if you were involved in designing similar algorithms?

Based on the article, do you see any limitations of Aerosolve? If so, what are those limitations? How would you address the limitations?

Do you see any ethical issues regarding this algorithm (or similar algorithms)? If so, describe your ethical concerns.

Aerosolve is now available for public use. Identify some business cases that could make use of this algorithm.

There are a lot of factors to account for when pricing a rental. I like that they came up with a way to define micro neighborhoods. This is something that I have noticed in real estate. There can be areas within areas where quality of the neighborhood can be significantly different. The fact that they can manually adjust the model for factors they discover is also a nice feature.

The limitation which they addressed is lack of dynamic pricing, and not using the data to train the algorithms. There are also intangibles that can be hard to capture, but they have worked toward this by adjusting prices based on user feedback. They want to use machine learning techniques to improve their algorithms, but they still want to have a good understanding of what the model is doing. These may be conflicting goals, and there has to be a balance between understanding and automatically improving algorithms.

A possible ethical issue is the sense of price gouging during events of high demand. This is a fair criticism, but things should be priced at what renters are willing to pay. The unfortunate consequence is that it can price out people who cannot afford what the market will bear.

I think realtor sites could benefit from using Aerosolve. Especially the micro neighborhood concept. Based on my inspection of prices on sites like Zillow, they seem to miss this aspect. Another aspect that real estate sites seem to miss is pricing intangibles that are not well defined. This information can be captured in renter feedback for rentals, but this does not exist for homes. It may be possible to capture this information from realtors showing homes and being able to vote on pricing. Parameters like how hot the local real estate market could also be used. The ability to adjust prices on the fly manually is a good one as well. Zillow sometimes prices things well below what they end up selling for. Someone more attuned to the local conditions could improve the pricing.