

**Discuss the idea of using RSSI as a proxy for distance and give examples of where it could go wrong. Is RSSI a good proxy for distance in this rescue use case?**

Although RSSI is inversely proportional to the square of the distance, many things can interfere with radio signals, so there can be inconsistencies between the RSSI and the distance (for example if there's a brick wall between the adapters). In our specific use case (the open ECSC building) it was a good proxy for distance since there was minimal interference. In the specific example of a "building fire" in a less open space (a building with a lot of rooms and hallways), it would be less effective as a proxy.

**Discuss reasonable values for z.**

Because the standard deviation measures the average distance from the mean, we would want the difference in RSSI to exceed the average distance in order to filter out noise from the standard deviation being too small. ( $\text{stdev} > 1$ ).

However, values close to 1 would still not be greatly separated from the average deviation from the mean. Additionally, z-values too high would not pick up our hand wave variation.

After testing, we landed on 1.5