Interactions between antibodies called Immunoglobulin E (IgE) and allergenic proteins trigger allergic reactions. When an individual has produced antibodies against a particular allergenic protein, sometimes the antibodies can fail to distinguish between the original protein and other proteins usually from the same protein family. This phenomenon is called cross-reactivity. There is a lot of prior research surrounding IgE and cross reactivity but that research is not easily available to the layman in a manner to be used practically. We use results from cross reactivity research and analyze which data can be reliably used for allergen prediction. This prediction can be further refined for an individual based on their allergen profile. Though clinical skin prick tests(SPTs) can determine the susceptibility of individuals to specific allergens, the proteins that an individual is tested for are limited in scope. So it is hard to determine if a protein for which an individual has not been tested for is safe or whether it can trigger an allergic reaction. Testing individuals for a plethora of proteins has proven to be not very effective. This solution aims to provide an answer to this question for proteins belonging to the same family by combining cross-reactivity risk score based on protein sequence similarity and identities between proteins of the same protein family and an individual's SPT to calculate risk associated with other proteins. The final classification maps allergens to their most common source of food, animal and plant based origin that are then marked as high risk, medium high risk, medium low risk and low risk.