## Ethical Storyboarding Activity - Group 3 MSU

## Write a one-paragraph story describing a fictional person who was **positively** affected by a model trained with these data.

### James runs a seafood restaurant downtown. He sells various dishes containing seafood, including calamari, shellfish, lobster, etc. His most famous dishes are those that contain abalone. However, abalone aren’t as accessible as other seafood because their population is low. Thus, they are very expensive to obtain. Fortunately, with a model that details the qualities of abalone(size, age, etc), can sell abalone for a price that allows to maximize his profits for the delicacy.

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## Write a one-paragraph story describing a fictional person who was **negatively** affected by a model trained with these data

### Megan is an avid consumer of seafood. She loves to eat meals like shrimp scampi, crab cakes, grilled salmon, and lobster tails. However, her favorite dish of all is simmered abalone with rice. She’s been eating it since she was a child and it’s a stapled tradition amongst her family. She cooks it for herself often, but recently it’s been difficult to buy it. The local market raised their prices on abalone and they aren’t affordable for Megan to buy them as often as she would like. The local market was recently renovated and now they have a new system(model) in place to measure the quality of their seafood. So with the new system being implemented, the market needed to increase their revenue to make up the cost of renovations. Thus, causing them to raise prices and forcing consumers like Megan to spend more for their favorite foods.

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## Describe at least two **sources of** **bias** the particular model in your story could have.

### One bias is that the model doesn’t know where the abalone was collected from. One abalone could be from Asia and another could be from Africa. So it would be very difficult to determine which characteristics make certain abalone unique. Another bias could be the absence of color and shape as characteristics of abalone. Two different kinds of abalone could be of the same length and size, yet be different species. Color and shape are some of the biggest factors to determine that.

## Describe at least one way we could **modify the** **model** to mitigate this bias.

## *E.g. What can we do when designing our model to account for inherent bias in the input data?*

One way would be to run multiple models of the data and record the trends we find in the data. This would allow us to better centralize the data and perhaps sort each abalone into groups that share similar characteristics.

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## Describe at least one way we could **modify the** **dataset** to mitigate this bias.

## *E.g. What could we do differently if we collected these data again?*

### We could definitely log where the abalone was harvested/collected from and log the unique characteristics of each one. We would include a column labled ‘origin’ that labels the place the abalone was found. Another column for the shell color and another for the interior color of the abalone. Perhaps another column detailing the shape of the abalone as well. With one-hot encoding, we’ll be able to manipulate the columns to be used for the model and produce better results.

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## Describe at least one way we could **modify the context** surrounding the modelto mitigate this bias.

*E.g. What human practices or policies could we put in place to protect people within the social system where this model is used?*

A policy that could be put in place is having abalone strictly sold by the pound or ounce. This way people can’t be severely overcharged for the product. This still works out for the sellers because they will profit as much as the demand produces. Also, the consumers will be encouraged to buy more because they have the freedom to do so.

Another policy to consider putting in place is a hunting restriction on abalone in those regions where the abalone population is thriving and where they are scarce. A reason for them being a delicacy is because of their rarity. Given they are on the verge of extinction, a restritcion on their collection is necessary.