Slide 2:

Fun facts about body fat. Not many of us know that having fat is not always bad. For example,

* It works as transport to convey vitamins like A, D, E and K around the body;
* Essential to maintaining body functioning;
* A source of stored energy to be used for daily activities;
* Helps to preserve heat;
* It even protects our body from trauma;

Everything is great when the percentage of it in our body do not exceeds the normal threshold. But what if it does? Then ‘Huston’ we have a problem, and that problem calls ‘obesity’.

Slide 3:

So, what do I mean by obesity? There is a medical standards that say if your BMI is less than 24 then you are in a good shape. If it’s between 25-29.9 then you are already in group of overweight individuals. And if BMI is 30 and more then officially you are obese.

You probably will ask, so what? How it will affect my life? It’s a good question. Let’s see. Based on some medical articles the obesity cause things like:

* increase a potentially serious health condition and by those conditions I mean
  + type 2 diabetes,
  + high blood pressure,
  + high cholesterol and so on. The list is pretty much huge;

Slide 4:

So, now is 1-million-dollar question, how can we measure our body fat so we can monitor it? There many ways to do it. It depends on your financial situation and time management. If you would like to do it at home then you can apply any types of BMI scales.

Slide 5:

It could be electronic or mechanical once. There are tons of different types on the market. You even can use a special fat ruler, but there is a pitfall, you need to know how to use it properly. The next one, but most professional is through medical procedure.

Slide 6:

Unfortunately, most of the time it’s very pricy, but the results are very accurate.

So, everything is perfect when everything is perfect. But what if we will simplify the whole thing. What if, we know how to use the simple measure ruler, we are already accustomed to use to measure out body parts when we decide which size of close we should pick.

Slide 7:

So, I decided to apply the same technique, but in a little bit different scenario to measure the body fat. So, I made some research about how medical industry calculates the PMI so I know which data I should collect to make the prediction model.

Slide 8:

And I ended up with 15 features. Unfortunately, not all of them were strongly correlated to my target one.

Slide 9:

For example if you can see features like: age, ankle, forearm, wrist have the lowest correlation with ‘bodyfat’ target feature. So, I decided to keep them at the beginning of training model as the ‘base line’ to see how it will improve the prediction if I will remove them later on.

Slide 10:

So, as the base line I was using simple ‘Linear Regression’ model. You can see the scores of it.