Machine Learning Case Studies

You've now seen a very simple example for how computers can learn. There's no great mystery to it -- it's a simple algorithm of making a guess, measuring how good that guess is (aka the loss), and then using this information to optimize the guess, and continually repeating this process to improve the guess.

What you've seen -- fitting numbers in an equation -- might seem trivial, but the methodology that you used to do this is the same as is used in far more sophisticated scenarios.

To understand just how powerful this simple method - Machine Learning - can be, lets now explore a couple of new and exciting case studies:

The first is the story of a young woman, Nazrini Siraji who used Machine Learning to detect diseases in crops, helping to stem the destruction of crops in her home country of Uganda: https://www.youtube.com/watch?v=23Q7HciuVyM

Next, is air cognizer, built by undergraduate students in India, who realized that pictures of the sky, when matched to labels on air pollution could be used to build a new type of air quality sensor, using just the cameras on their phones: https://www.youtube.com/watch?v=9r2VVM4nfk8

Finally, here's a talk from a Google engineer about how Google used images of retinas to build a diabetic retinopathy detector using TensorFlow that performs state of the art diagnosis of this disease: https://www.youtube.com/watch?v=oOeZ7IgEN4o