Neural Networks in Action - Case Studies

We've 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 (i.e., the loss), using this information to optimize the guess, and continually repeating this process to improve the guess.

What we've seen -- fitting numbers in an equation -- might seem trivial, but the methodology that we used to do this is the same that 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:

1. This is the story of a young woman, Nazrini Siraji who used Machine Learning to detect diseases in crops, helping to minimize the destruction of crops in her home country of Uganda: ▶ Nazirini's story - using machine learning to tackle crop disease

2. This is the story of undergraduate students in India that built an air cognizer using Machine Learning using pictures taken on their phones. They mapped pictures of the sky to labels on air pollution to build this new type of air quality sensor: ▶ Powered by TensorFlow: Air Cognizer predicts air quality with machine learning

3. Here's a talk from a Google engineer on how Google used images of retinas to build a diabetic retinopathy detector using TensorFlow that performs state of the art diagnosis of this disease: ▶ Case Study: TensorFlow in Medicine - Retinal Imaging (TensorFlow D…