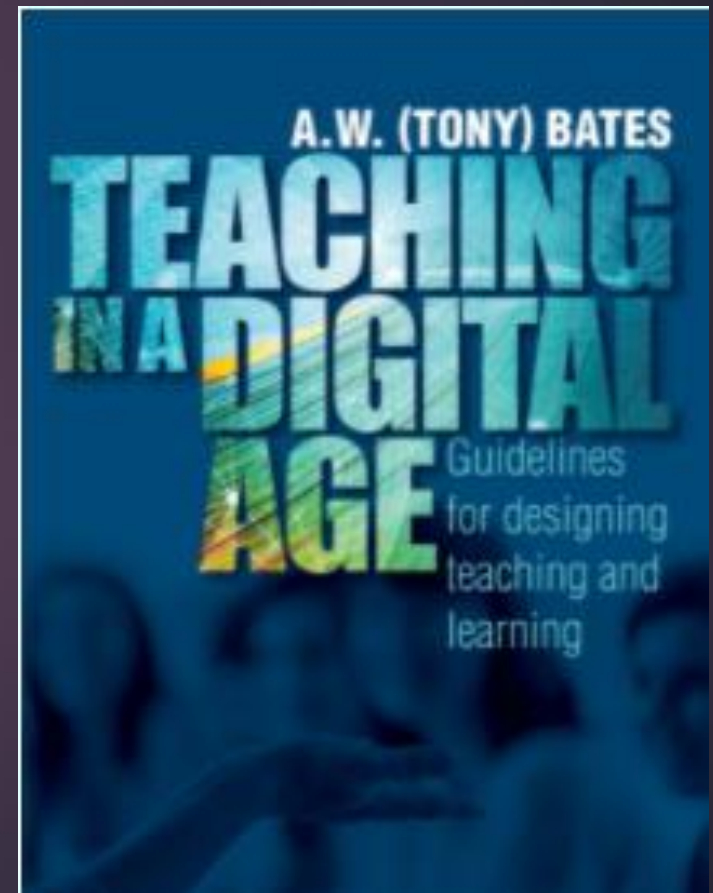


Teaching in A Digital Age

Afshin Sarafi Nejad

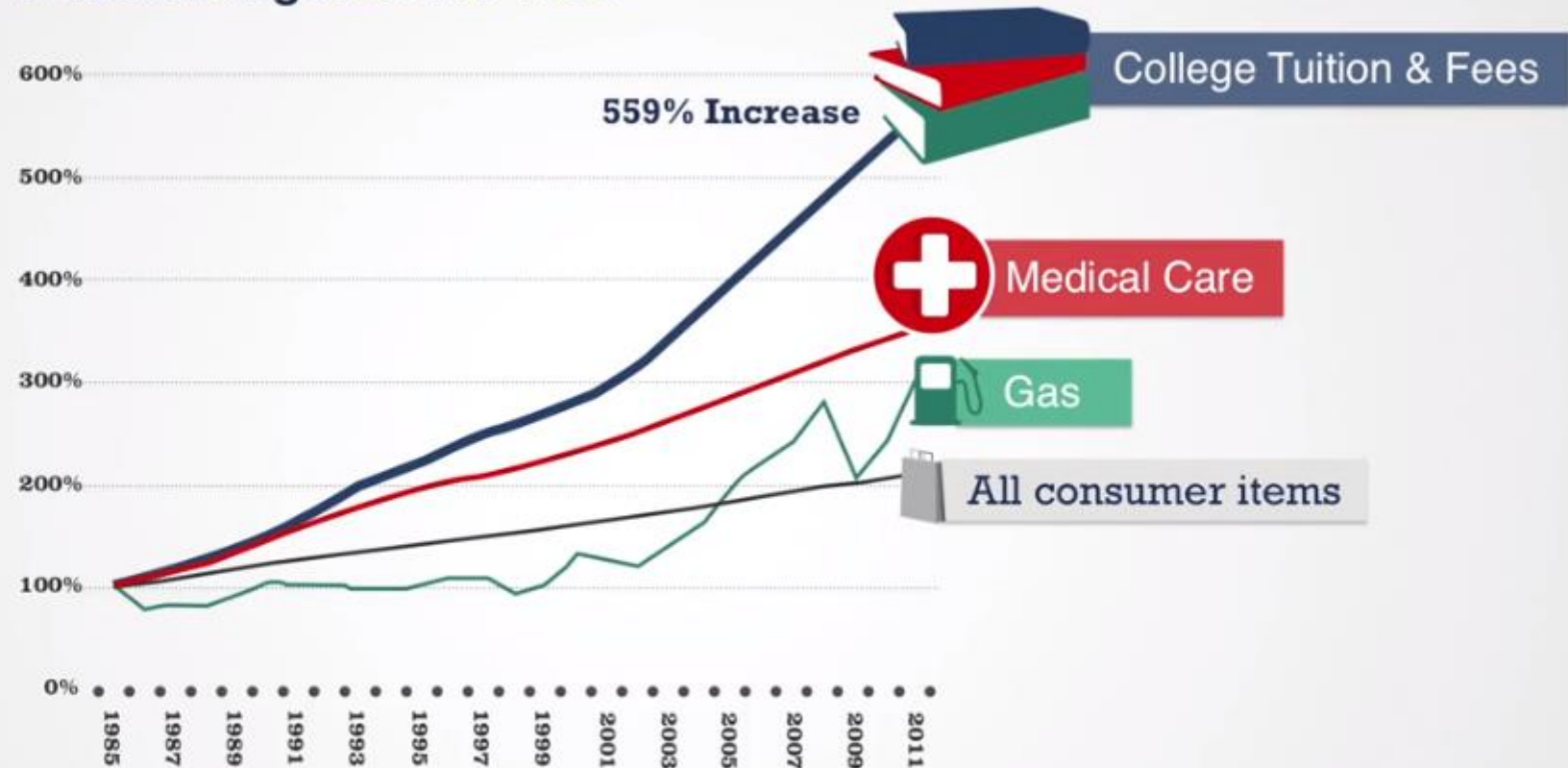
MD., PhD.

KMU-VUMS



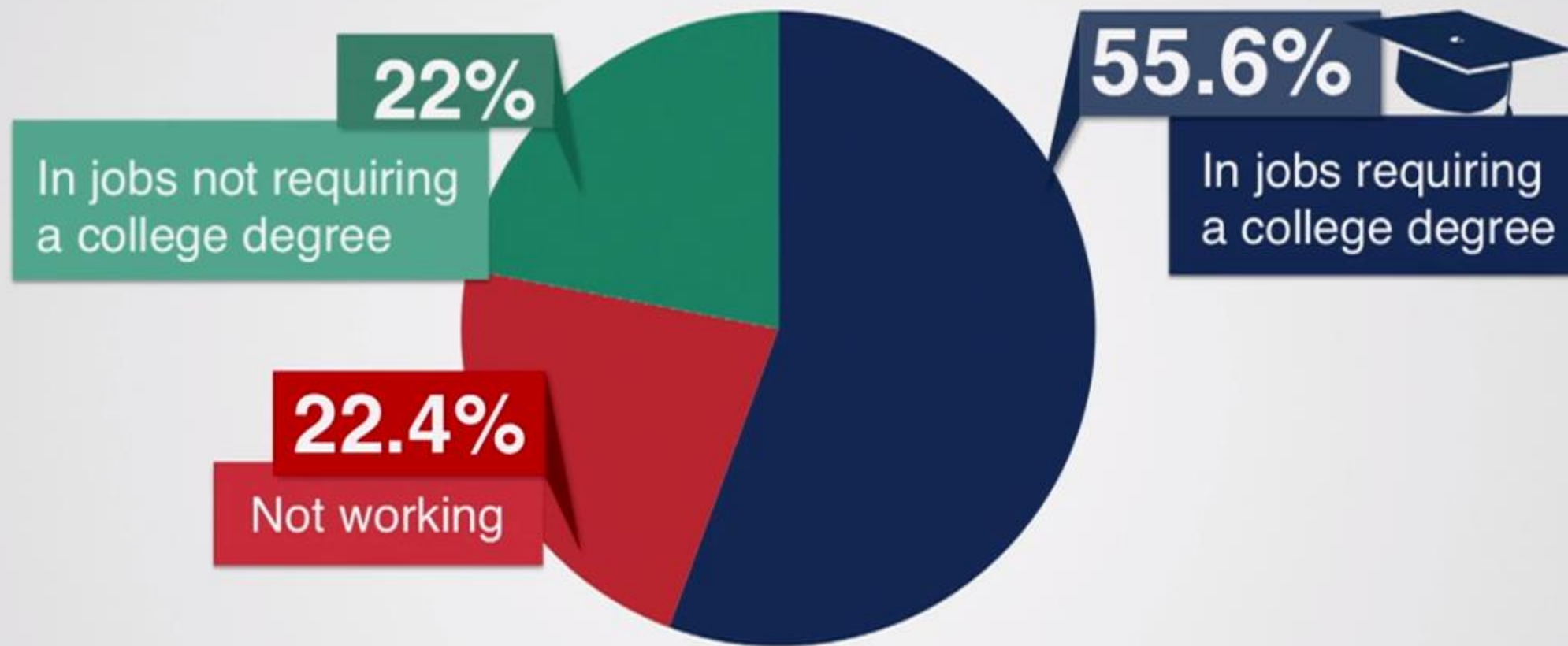
What we're learning from online education

Price Changes Since 1985



Source: Bureau of Labor Statistics

Affordability



Source: "A College Degree, but Not a College Job." (A. Sum, *New York Times*, 19 May 2011)

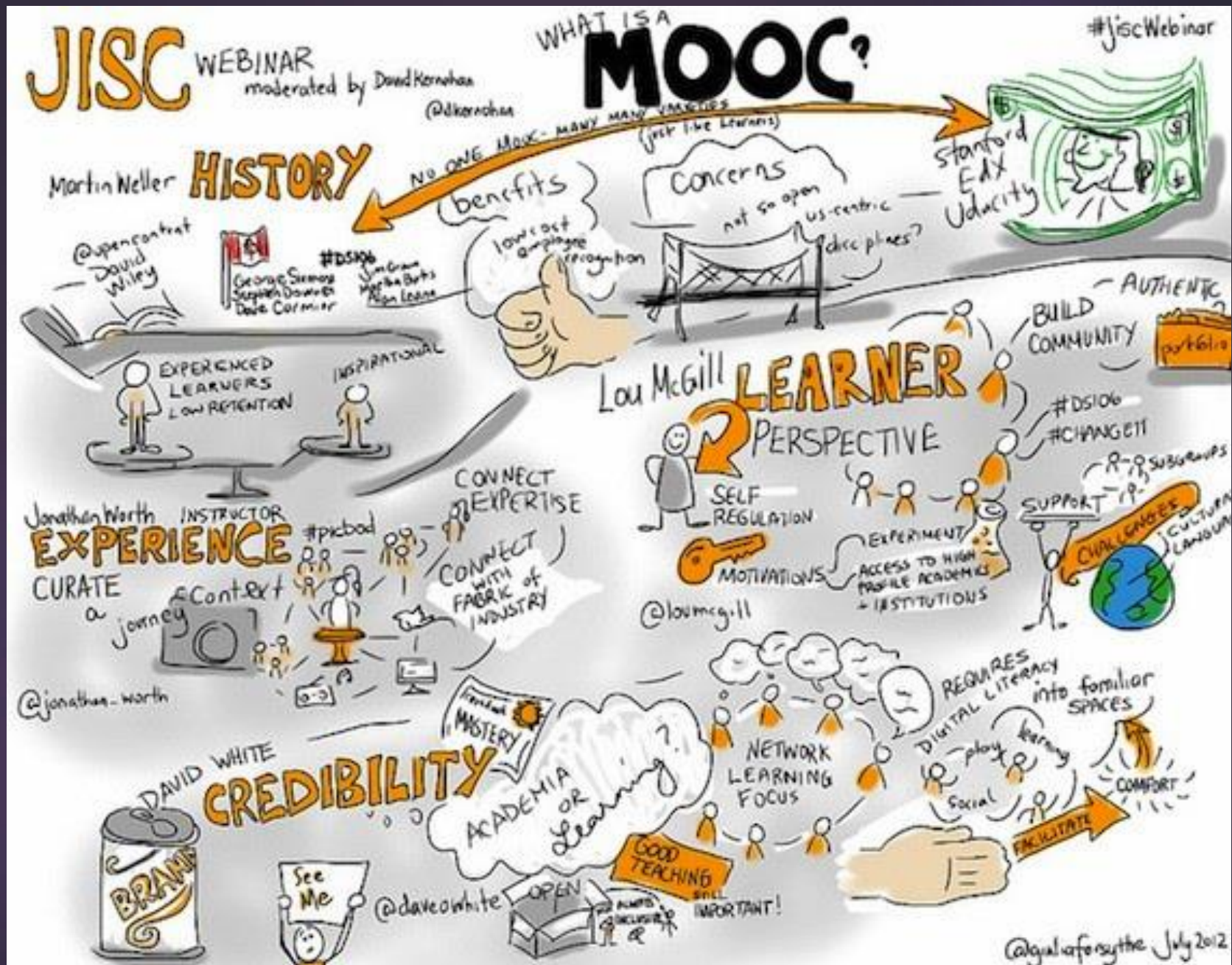
Opportunity



The Online Revolution: Education for Everyone

Daphne Koller & Andrew Ng
Stanford University & Coursera



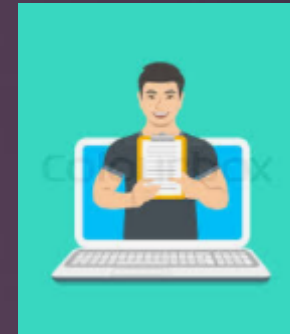


MOOCs

- ▶ **Massive**
 - ▶ Huge Numbers of Educators and Learners
- ▶ **Open**
 - ▶ No Limitation or Pre-Requisites for Participating, Free Access
- ▶ **Online**
 - ▶ Mostly Online, Sometimes Blended Format
- ▶ **Courses**
 - ▶ A Whole Course

Specifications

- ▶ **Specially designed platform software**
 - ▶ registration of very large numbers of participants
- ▶ **Video Lectures**
 - ▶ normally available on a weekly basis
- ▶ **Computer-marked assignments**
 - ▶ online test and immediate computerized feedback
- ▶ **Peer assessment**
 - ▶ small groups of students for collaboration on problem solving
- ▶ **Supporting materials**
 - ▶ slides, audio files, PDFs, URLs, or articles



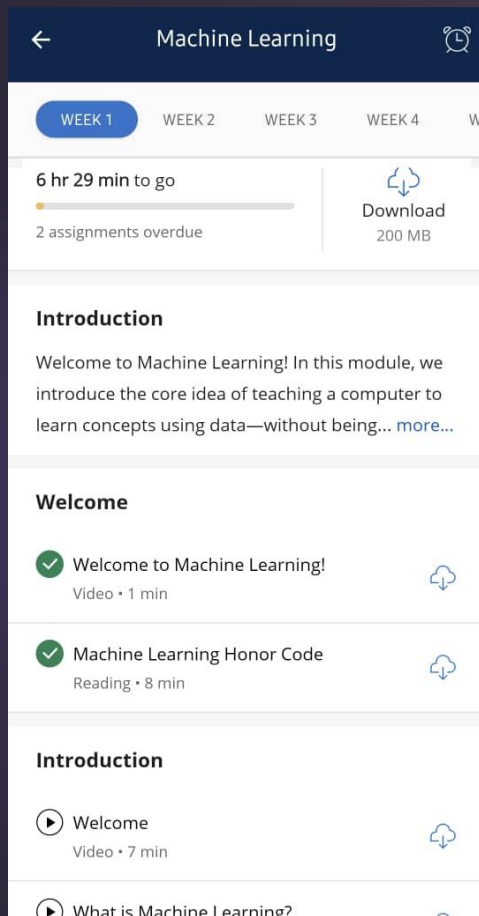
Specifications (Cont.)

- ▶ **A shared comment/discussion space**
 - ▶ everyone can post questions, ask for help, comments, ...
- ▶ **No, or very light, discussion moderation**
 - ▶ all should be able to discuss, but moderation is a challenge
- ▶ **Badges or certificates**
 - ▶ not even as credit, but good for encouragement
- ▶ **Learning analytics**
 - ▶ should be able to analyze big data
- ▶ **Autonomy of the learner, diversity, interactivity, open-ness**
 - ▶ personality, skills, co-operation, communication, freedom, ...

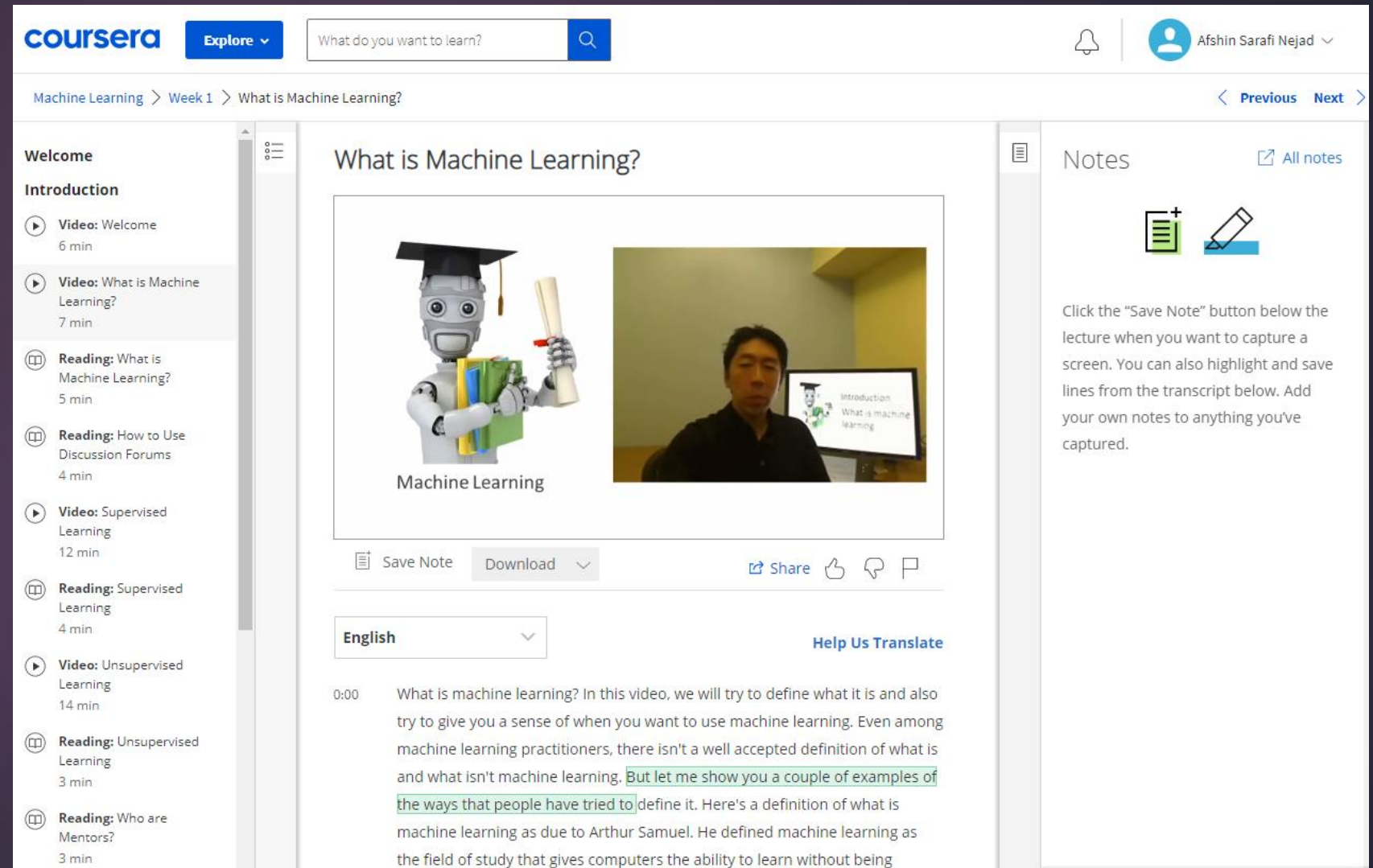


An Example – Machine Learning

► Almost all of the features are here!



The mobile app interface for the Machine Learning course. It features a top navigation bar with a back arrow, the course title 'Machine Learning', and a clock icon. Below the bar, there are tabs for 'WEEK 1', 'WEEK 2', 'WEEK 3', and 'WEEK 4'. A progress bar indicates '6 hr 29 min to go' and '2 assignments overdue'. A 'Download' button shows '200 MB'. The main content area is divided into sections: 'Introduction' with a welcome message, 'Welcome' with two items (a video and a reading), and 'Introduction' with one item (a video).



The desktop web interface for the Machine Learning course. It features a top navigation bar with the Coursera logo, an 'Explore' button, a search bar, a notification bell, and a user profile. The main content area is divided into three columns. The left column is a sidebar with a 'Welcome' section and a list of items (videos and readings). The middle column is the main content area, showing a video player for 'What is Machine Learning?'. The right column is a 'Notes' section with a 'Save Note' button and a 'Download' button. The video player shows a robot holding a diploma and a man speaking. The transcript below the video shows the text: 'What is machine learning? In this video, we will try to define what it is and also try to give you a sense of when you want to use machine learning. Even among machine learning practitioners, there isn't a well accepted definition of what is and what isn't machine learning. But let me show you a couple of examples of the ways that people have tried to define it. Here's a definition of what is machine learning as due to Arthur Samuel. He defined machine learning as the field of study that gives computers the ability to learn without being'.

با تشکر از توجه شما

