List of online-educational videos watched:

1. EdX 6.041x: Introduction to Probability
    - Highlighting visual parts that correspond to the audio script. Analog of laser pointer or indicator.
    - When complete slides are shown from the onset, making them appear in sequence as the topic is dealt with.
    - EdX: already cut into short sections with interspersed exercises. Could we do this for longer videos automatically?
    - How to fast forward visual–drawing or writing takes more time than audio so instructor inserts unnecessary remarks or slows down.
    - Without audio or script no idea to tell which part of slide the video is on (e.g. 6.041x, unit 3, unit 4 lec.5)
2. EdX: CS-184.1x Foundations of Computer Graphics
    - Some slides could be better if combined (e.g. when it is under same title (continued...), chunks of code cut for space reasons–lecture 6, video 2)
    - Making links in the slides clickable (e.g. Ravi's homeapge)
    - Link the exercise questions to relevant parts of the lecture so that students can go back to find information specific to the question.
3. KhanAcademy: Differential Equation
    - Remove useless parts of script, or rate them by importance. Visuals tend to be stationary when instructor is bantering.
    - Drawing arbitrary borders on blackboard instead of having discrete slides
    - Usually the instructor reads aloud what he is writing, and this is transcribed in the script. This may be useful to automatically change handwriting to typewrite.
    - Scrolling down board occludes "current relevant parts"
4. Khan Academy: Spring potential energy example
    - Important explanation is not necessarily written on board, but it is in transcript.
    - Also the spatial layout of the board is not sequential (left to right, or top to bottom)
    - Cut into sections the visual parts, and rearrange. Allowing copies.
    - Correcting mistake.
5. Udacity: Intro to Haddop and MapReduce

- Lecture is sectioned into multiple videos with different topics. On the top of the video there is a bar to choose sections titles. Something similar, where the time line is sectioned into parts of lectures would be useful. (e.g. explanation of potential energy, example problem etc.)
- Transparent hand with pointer.
- They built in problems inside lecture! And it gave feedback on the right hand side. This seemed to be not part of the video, but a web layer on top of the video.

General ideas:

1. Difficult to define the problem: I keep wanting to improve the lecture content, slides.
2. Putting in headshot, when available when nothing interesting is happening in the visual slide (e.g. tv news)
3. Augmenting script with slide titles.
4. Categorize the script by importance: e.g. passing comment, examples, definition etc.
5. Where do students want to refer to? Which parts of lectures are most repeatedly watched?
6. Scope of problem: Which techniques can be applied generally, and which are type specific?