



COMPLEXITY EXPLORER

SANTA FE INSTITUTE

Table of Contents

Basic setup

I.	Equipment	2
II.	Software	2
III.	Lighting	2-3
IV.	Background	3
V.	Camera	3
VI.	Clothing	4
VII.	Background noise	4

Structuring your video content

I.	Video setup	
	a. Scripts and outlines	4-5
	b. Recording styles	5-7
	c. Length of final videos	7
	d. Slides and other visuals	7-8
II.	Performance	
	a. Testing	8
	b. How to record	8-9

Submission

I.	How to submit	9
II.	File types	9

Basic setup

I. Equipment

Any basic in-laptop camera/webcam/microphone/recording setup should work. If you have any questions about your setup or need equipment contact admin@complexityexplorer.org.

II. Software

We will have the most editing flexibility to assemble a polished final product if you send us separate files of your slides/content and the video of your talking head.

To record video of your talking head, you may use Photobooth, the Camera app, or other readily available technology. You could also use an iPhone or other smartphone with a good camera.

You can record your slideshow as a video easily in PowerPoint or Keynote. More information on recording in Keynote [here](#). More information on recording in PowerPoint [here](#). Remember to record the presenter view! You can also use this method to record voiceover audio of your slides where applicable. This not the highest quality, but can be a good option for animation-heavy content. If you chose to record your slides, please also send us the slideshow along with your video.

You may use Zoom to record. This often provides an easy and familiar interface. If you use Zoom, you can still record separate files if you chose, ie. record your talking head without the sharing your screen and provide slides and/or a recording of your slides. You may also record your video with your slides as a screenshare.

III. Lighting

Recording during the day is best! Position yourself facing a big window. Natural light is always better than artificial light (like a lamp). Artificial light comes in a lot of different color temperatures that aren't noticeable to your eye, but can look strange on camera.

An example of good lighting from a window:



Have to record at night? Make sure your light source is in front of you so we can see your face! If the light source is behind you, you may be hard to see.

IV. Background

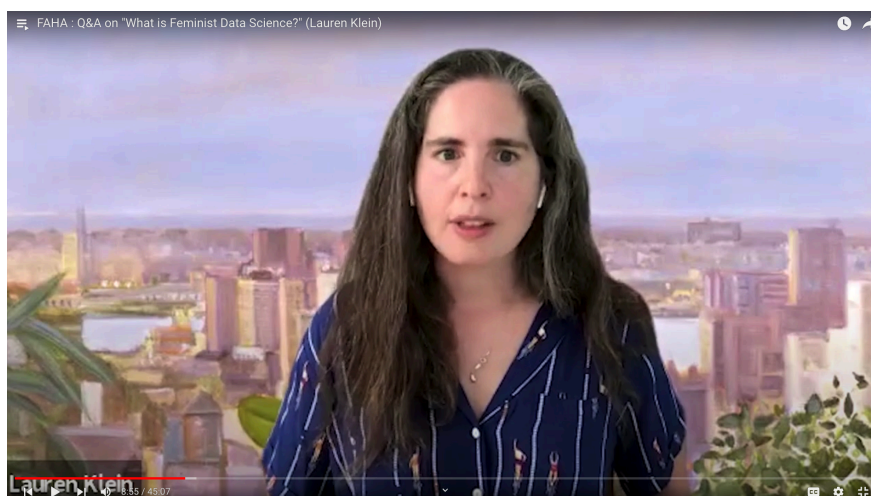
Be mindful of your background. Your natural environment can affect the quality of your video and conveys your unique personality and approach.

Select a background that is clean and neutral in color. Avoid clutter and busy patterns. A blank wall works well.

V. Camera

Position the camera to be straight on or slightly above you. It can be pointing downward slightly for a more flattering angle. Avoid angling the camera up at you because it will show off your nose and chin, which can be distracting.

Fill the frame. Position yourself so you're squarely in the middle of the frame, with your nicely lit face filling up at least one-third of the space.



VI. Clothing

Wear something bright and solid. Darker clothes don't always show up well on camera. Avoid busy patterns like checks, florals, and tiny stripes – these can cause issues with the camera that can be distracting.

VII. Background Noise

Eliminate any ambient background noise before you start recording. Turn off any loud air conditioners, heaters, music, etc. Let your family members, roommates (and pets!) know that you will be recording, so they can be quiet or go outside.

Unexpected noise interrupts your recording? No problem! Just treat it like a normal mistake. Pause and go back to the previous sentence so it can be edited out.

Structuring your video content

Video setup

I. Scripts and Outlines

Create an outline you can use to draft a script for your videos. We have a list of questions to help you get started, and some guidelines to help with this process. Your outline and scripts will help you to stay on topic and make sure you aren't missing any necessary content to meet the learning objectives you defined at the outset of the course. Revise your script, practice a few times, and then prepare to record!

Not everyone likes working from a script, and that's ok! If you have a clear idea of what you'd like to say, you can just create an outline and skip the script. Creating a script is a larger upfront time investment, but can make the recording process easier later. It's up to you to decide what works best for you.

Some general guidelines for Complexity Explorer content and audience:

Stay on topic. In online courses students tend to be very goal-oriented and therefore tend to skip over content that is not directly related to the learning objectives of the course.

The Complexity Explorer audience is very international. References to nation-specific or culture-specific examples might not work. Jokes and sarcasm often do not easily cross cultural

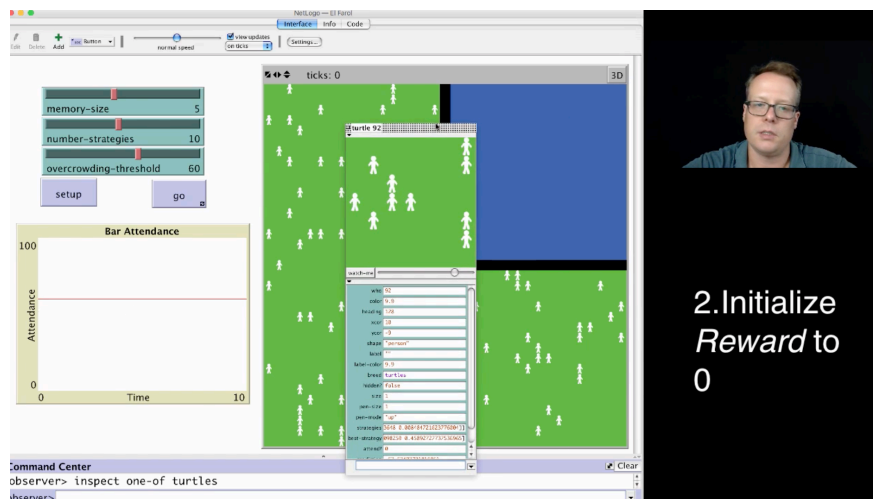
or linguistic boundaries. Keep in mind that many Complexity Explorer users are not native English speakers. Aim for clarity. Keep it simple and be direct.

II. Recording styles

We use a few different recording styles for our content on Complexity Explorer. Our students have expressed a preference for video content that includes the instructor so they can get to “know” who is teaching the course. It is important to consider which style of video content will be most effective for your unique course. We will be happy to discuss this with you in more detail and advise.

- **Talking head**

This style means that your talking head will be featured in the video alongside your slides or other content. Students have expressed a preference for this style of content. If you would like to use this style you should plan for some blank space in your visuals or a more shrunken visual to make sure there is room to fit the video of your face without obstructing your content.



The Challenges of Patterns

How can we turn a “humanities” question about patterns into one a computer can answer?

operationalization

Are the patterns we’re finding fundamental, or epiphenomenal?

validation

Could they be accidental?

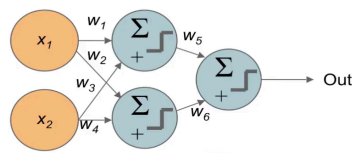
statistical testing

How can we interpret them?

visualization

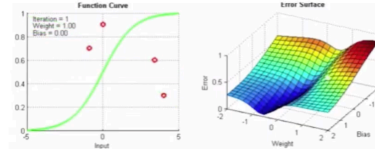


1986: Training algorithm



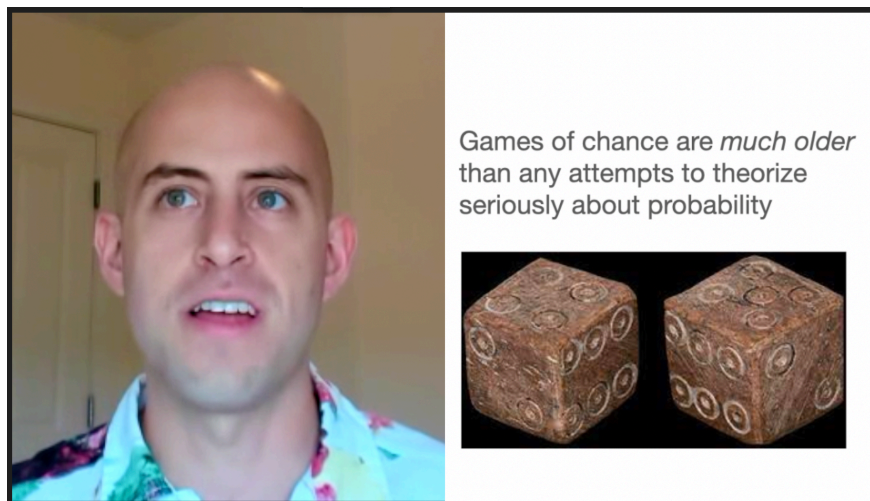
"Gradient Descent"

Error Surface



- **Split screen**

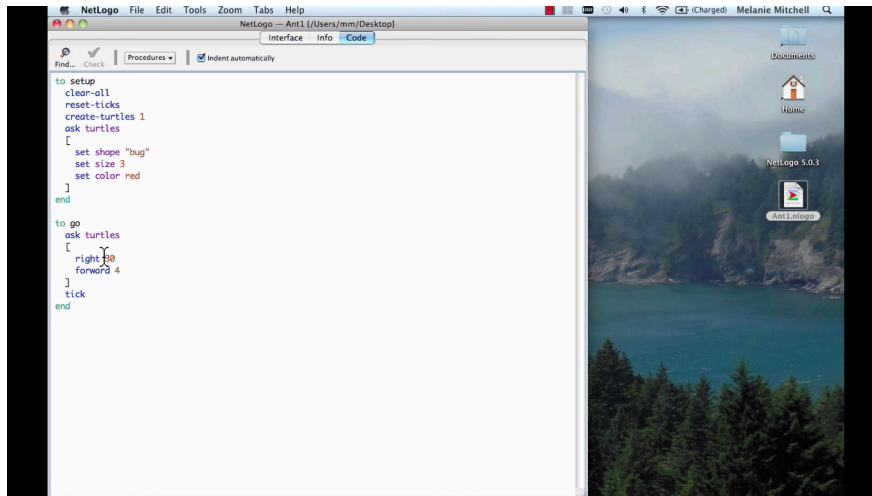
In a split screen video, half of the video will feature your slides or other content and half will feature your face. In order to make this work, you need to plan your slides accordingly.



- **Screen capture**

This is great for demos or any content where it would be helpful for the student to see the full screen. Keep in mind that students of Complexity Explorer have expressed a preference for content that includes the instructor. However, for something like a coding demo being able to see the entire screen as clearly as possible takes precedence.

Record your screen content (this shouldn't be difficult to accomplish in a single take – it can be freeze-framed or slowed down later) and then use a voice over (which sometimes needs a couple takes) to talk us through your screen recording. Keep track of the timestamps of the segments you want to use of your voice recording and how those line up with your screen capture.



- **Zoom-style recording**

This is the easiest recording option, but also offers the least editing flexibility. If you chose to record on Zoom you should plan to produce files that will not require editing within the individual video files (ie. we can't edit out ums, uhs, or other filler words). We can and will, however, edit together your best takes to create one cohesive video.

We can combine segments from different takes to achieve your best file. You can record in short segments. If you do take a break, we recommend at least a 30 second pause to make the editing process easy.

III. Length of final videos

Our YouTube viewing statistics indicate that the attention span for course content on Complexity Explorer is around 12 minutes. After 12 minutes, viewers start to drop off. Keep your videos short and concise.

IV. Slides and other visuals

Use PowerPoint, Keynote, or any other standard file format to send us your slides (for example: PDF). We can provide a PDF of your slides to students on Complexity Explorer, if you'd like.

Guidelines for slide creation:

Use a white background with black text. Keep your slides uncluttered and simple. This makes your content most broadly accessible.

Use an easy to read font, at least 12 pt. Avoid lightweight fonts – medium to bold are better. Use a font with adequate spacing between characters and words.

Use colors to highlight key concepts and draw attention to diagrams or text. Pick colors with strong contrast.

When using color, make sure students who are colorblind will also be able to see the contrast. Use this [website](#) as a resource to see how your color palette will appear to students with different types of colorblindness.

If you can, try to include some verbal description of your visual elements for anyone who is having trouble distinguishing. This is not required – but we appreciate it where possible.

Please do not include logos or other branding on your content slides. You may include logos or other branding on your introductory and final slides. We are also happy to include logos and branding on the landing page for your course on Complexity Explorer, YouTube, etc.

Other visuals

We can include animations in GIF format to help illustrate your material. Want to include another type of visual content? Contact us to discuss!

Performance

I. Testing

Before you create the bulk of your video content, test your setup. Shoot a short test segment or your first video and upload to our secure box folder for review and email admin@complexityexplorer.org. If there are any issues with your audio or visual setup, we will advise on changes before you proceed with recording the rest of your videos.

II. How to record

Use a conversational pace and volume. You don't need to speak more slowly or loudly than usual. The goal is to hear every word clearly.

Don't worry about getting a single, perfect take. You can record section-by-section, with a couple takes per session. Those can be edited together later. Pause for 10-15 seconds between takes to make sure the video editor is able to break up the clips.

Hit record and go! Often, it is easiest to just hit record and go ie. don't stop and start recording for each section. This creates a lot of files. Especially for a smaller project, try to record a decent chunk before stopping the recording.

If you make a mistake, don't worry! Just pause and take a breath, then go back and start at the beginning of the previous sentence. No need to start over completely, these small mistakes can easily be edited out, especially if you pause, leave a space, and go back to before your mistake. You can also say, "I made a mistake, I'm going back to the beginning of the last sentence," to make it clear to the editor.

When you make a mistake, or know there is something that needs to be edited out, note the time. Keeping track of timestamps where there are mistakes or things got a bit wonky will help us get your video edited and onto the website efficiently.

Uhms and Uhs. Uhms, uhs, and other filler words are a natural part of speaking and not a big deal. They are typically not noticeable, and won't detract from your content.

If you find that there are lengthy uhms and uhs that you would like edited out note the timestamps and we will do our best. This can be tricky if you are talking fast without distinct breaks between words. If you notice you're saying uhm a lot – try to pause after each uhm to make it easier to edit.

Alternatively, you can always work to record a version that is free of filler words.

Submission

I. How to submit

Upload your final video files to our secure Box folder.

II. Files types

Please upload your video files in one of the following formats: MP4, MOV, WMV, AVI.

For audio files MP3, M4A, WAV are preferred.

If you have any questions about file types or need help converting email admin@complexityexplorer.org.

Questions? Contact admin@complexityexplorer.com and we will be happy to help.