

Intro to Mapping and GIS: Module 4, part 5 Exporting maps out of QGIS

Welcome back everybody to the last video of our course on intro to GIS and mapping for journalists. We've done a whole lot in QGIS, we've done some data analysis, we've created some maps. Now, we're going to talk about exporting shapefiles out of the program to get them on the web. So really we've really kind of touch on the analysis part up to this point, but obviously the next step is getting it online, so letting the world see it, so we're going to touch a little bit on that in this course.

So the first thing I want to point out is which we've actually done a few times, but I just want to touch on a real briefly in terms of options that you have for exporting the data, I have QGIS. First is the one we've been doing is exporting as a shapefile. So go ahead and right click on your country's layer, which I have pulled up. If you don't have a pulled up getting pulled up and then going right click on it, hit export, save feature as, we've left the format alone at this point, so obviously if you want to do a shapefile, you can do that.

This will be nice if you have someone else you're working on with the project with and you've done some work, you've simplified some things, you might have done some analysis here and there and they are going to do some more analysis or potentially visualize it and they have QGIS or another program that open a shapefile so you can export it as a shapefile and get it to them that way.

So I'm going to go ahead and hit OK, again as we've seen throughout the course that adds a new layer on here as well. So, another option is is to get it ready for print and this can mean a few different things. For us at the Texas Tribune we use this setup when building maps to create like a print version that we actually pull into illustrator, then we clean it up and then we put it on our website.

So if you're familiar with illustrator or a program similar to that, this is a good option to go on if you want to sort of do a lot of the work in QGIS clean up and make it look real nice in illustrator and then basically have it at be an image or series of images for the web. We're not going to talk about illustrator in this class, but if you're familiar with it, this is this is how you would get there.

So go ahead and go up to the project menu button at the very top, go down to new print layout and then go ahead and type in a name, I'm just going to put Texas Tribune, you can put in whatever name you want and this creates sort of like a blank sheet here and anything that we put on here, we're actually going to export as a PDF and then from there we pull that PDF in illustrator and clean it up.

So you can do a lot, you can do the color changing in illustrator, you can do it in QGIS, it kind of depends on you and what your expertise is in whatever program, there's a couple different ways you can go about this, but if you do at some point want the pipeline include illustrator, or if you

just want to put the straight PDF online as well, that's also possible. This is how you would go about doing that.

So we got the blank sheet. Go ahead and go over here to the 'add a new map to layout button' this little white button right here with the little green plus sign, go ahead and drag very large on this little layout the map that we're going to use, and you'll see what's interesting about this view is it's basically whatever is in the viewer, like what you're actually looking at over here is what will show up.

So let's go ahead and close out of this for now. I'm going to just show you kind of what I mean. Let's just say we're going to be again pretty focused on the U.S. for this example. Let's zoom in on the U.S., let's go and do that again. Once you create a new print layout, you don't actually have to create it again, you can actually go down to layouts and hit Texas Tribune or whatever you called it.

So you don't have to go through that process again. If you delete that and you recreate the circle you'll notice that it's now zoomed in on the United States. So this is really nice, again, if you have data for a particular area, you can zoom in on that data, you can go to new print layout and then it will show just that part of the map, so that's pretty nice.

Another thing you'll want to add for sure especially if you're getting it in illustrator is this button right here. You can go ahead and again draw a little drag a rectangle and let go, and what this will do is it will show like a little legend. This isn't super helpful for what we're working on because the only shapes we were using was the cutter for the original countries, shapefile that you download from Natural Earth, and then the one we just saved which is sort of like a simplified version of it.

So this legend isn't super helpful, but depending on what you do in QGIS it may be. If you had a few layers, if you start labeling things certain way, if you start coloring things certain ways like we did before then the legend becomes a lot more useful, but just know that that's how you put it on there. The other thing you'll definitely want to get on there is a scale bar, so that's the button right under there. So go ahead and draw like a little rectangle and then you have a little scale bar and this is default to kilometers, which will be fine for example.

So we got that on there, go ahead and go up to layout, and export as PDF, and I'm going to save it in this directory, and we now have a PDF. Let me go ahead and open that up and show you what it looks like. We get to this directory it's in, and there we go, we have a PDF, the map we just created with our legend in our scale bar.

Again, legend isn't super helpful in this instance, but it is there as an option, so it looks pretty nice, it is pretty sharp. You know if we colored it a little nicely, you know, if we made that choropleth map that we did earlier, we put the legend on there in the scale bar, it actually looks pretty decent.

And then again if you want to pull it into illustrator, you can make it look even sharper. One other option for that is if you go back and do layouts, you'll see your map is still loaded in here, you can go to layout export as SVG. That is another option depending on what you're doing, and where you're publishing, and what you have at your disposal and SVG may work as well. SVG is kind of like an image with code underneath it, but it is kind of like an image so that might work for your cases.

So but feel free to kind of play around in that print layout mode, there's some other options. Obviously you can export it as an image, there's some other properties here you can mess with. I'm going to go ahead and export it as an image just to kind of show you what that looks like. This will save it as a PNG, you can set the resolution, you can set the page width and height which is really nice. Go ahead and hit save and there you go, very similar map to the PDF just a PNG which might be what you need.

So go ahead and close out all of that and let's get back to this original map here. One last thing, I'm going to plug real quick before we close out here. Go ahead and right click on this, go to exports, save features as, GeoJson which I mentioned very briefly in the previous video is actually what you would need if you want to use code to make a map, which is what we do that at the Tribune.

Sometimes we use illustrator, sometimes we use code to build a map for the website. We use light JavaScript libraries to make that happen. So if you export to GeoJson, that is a JavaScript native language that you can then open if you write some code and use a JavaScript mapping library, you could get this map or at least the shapes of that map on the web using the library in this GeoJson file.

So it's really kind of a simple rough explanation of what's going on here. We'll say that we do have reading materials on an intro to JavaScript like class in an intro to leaflet, which is a mapping JavaScript library. So the idea is if you go through those two, you will be able to sort of put together a very simple leaflet map, which again is a JavaScript library and write code to actually build maps.

So I put those together for a conference, but they're available for anybody to use and should take you a few hours, and the idea is you have no experience and you end up knowing a little bit and at least enough to put together sort of a leaflet map.

So once you get to that point, you can make maps and leaflet and then you could export these shapes and GeoJson. You can pull that GeoJson into leaflet and then you could start using the leaflet library to build these maps and get them on the web. And leaflet has a real ton of really great features and is used by many news organizations and many other big and small corporate companies. So it's really great in a lot of different ways.

So let me go ahead and just export this real quickly. I'm just going to call this U.S. again, go ahead and hit OK, and you will go ahead and open this up. This is the GeoJson file in case you're curious, this is going to look intimidating and hard to read, but again, once you get to the point where you know enough JavaScript to know how to use a mapping library, like leaflet or mapbox, mapbox is another popular one, that library can use this file and interpret it and recreate those shapes and then you can use that to style it. You could add other points on the map, there's a lot you can do.

So that's it for this course, I really appreciate you tuning in. We've gone through a whole lot, I hope you've enjoyed it and I hope you've learned a lot. I encourage you to now that we've gone through the process of editing data and opening shapefile, and coloring them and now exporting, I hope you create your own maps and kind of let the world see your creations because that's what this is all about, creating maps and letting the world see them.

We have a Facebook group for this class, so if you want to export your files and work with them, whether it's leaflet or illustrator or just the PNG file and get them out there in the world and have other people look at them and get feedback from people literally all over the world, that's a great way to do that. So yeah, just keep mapping and thanks again for tuning in. Take care!