**Imperial Visualisations**

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*Suite Guide*

Welcome to the Imperial Visualisations developer team! It’s expected that a new developer has no previous experience in any web-based language; all we expect is knowledge of code and the enthusiasm to learn. This document will take you through what you need to think about when creating a new visualisation and the key things to consider when starting to make improvements on existing ones.

**Finding the overall goal**

When creating or improving a visualisation, the most important thing is to have clarity on what the visualisation is trying to achieve. Spend some time thinking about the key realisations you want your user to have, and how to place them in a well-ordered manner such that the learning process is as clear as possible. Think about what the user already knows, what knowledge do you assume? Do they need refreshing on some of the key concepts that'll be used later?

The title of a visualisation is very important. Be clear on actually what the content of a visualisation is. So, for example, instead of having “Fourier series” as a title, something like “Deconstruction and reconstruction of functions through Fourier series” would be much better.

**Sub goals/learning steps**

Early in the creation of a visualisation it’s important to think of what the key learning steps you want the user to have are. Think about how many steps you want to make, currently visualisations have between 4 and 6 pages, typically with one ‘learning step’ per page. For the content you will be demonstrating you may feel this is about right, but it’s possible that this is either too many or too few. Perhaps you only need 2 or 3 pages to fully explain the topic, or for complicated topics that build up through a lot, 9 or 10 pages might be a better idea.

A good way to list these steps and to decide how many to have is to write down sub-titles that you think each page deserves, where this sub-title describes what that page’s learning step will be in just two or three words. This makes it more obvious to the user the main result they need to take from that page as well as making the visualisation easier to navigate if they need to come back to anything. It also helps you keep track of the structure of the learning journey when creating a visualisation.

When creating a visualisation its important to consider the style of page Imperial Visualisations uses. Currently the left third of the page is a scrollable page which will explain the content, so any theory or derivations would go here. The middle and right third of the page will then be dedicated to the interactive part of the visualisation, anything that can be clicked, dragged or played with goes here. If this isn’t clear check out the Fourier series visualisation, this is a working model for the style we’re going for.

Note that you don’t want the user to have to scroll on the right-hand side of the page. The idea is that the user scrolls on the left-hand side of the page reading the content/explanations, and when they’ve reached a section where the next visualisation is more relevant, the right-hand side updates and shows new interactive material which they’ll go on and use. Done properly this gives the learning journey very good structure, as interactive material is revealed to them as they build up their knowledge of the topic at hand.

*Khan academy* and *Coursera* are great places to look for well thought out learning journeys, check these out!

**Link with navigation**

We’ll see!