Analysis Function Learning Pathways

New “Analysis Function Learning Pathways” have been developed to bring together analytical courses from a range of providers, supporting the Function’s aim to develop analytical capability across government.

Following the suggested sequence of complementary courses will help you to see where your learning could take you and provides suggestions on follow-up courses if you are interested in developing your learning further. The pathways will help you develop a stronger holistic understanding of analytical topics and be supported in continuing your progression more so than by taking a stand-alone course.

There are a variety of pathways available, with one to suit you whether you are a coding whizz or have done no analysis before. Each pathway has an attached persona, helping you understand which pathway is the right one for you.

To give you an idea of what you can expect from each pathway, why not explore these examples:

Communicating Insights

Communicating insight is extracting insights and information from data and communicating them to decision-makers in a way they’ll easily understand. It is as important as researching or analysing data. This pathway will provide you with a basic understanding of risk and issues surrounding statistical disclosure, communicating quality, change and uncertainty as well as best practices of conveying your message using visual aids.

After completing the three courses in this pathway you should be able to:

- Understand the key risk of statistical disclosure while communicating your results.
- Describe the principles and issues of communicating quality, uncertainty, and change for effective communication.
- Understand the existing guidance to improve publications.
- Communicate the results using visual aids by following best practices.

Reproducible Analytical Pipelines (RAP)

Reproducible Analytical Pipelines (RAP) focus on the use of open-source analytical tools and a variety of techniques from various fields such as software development, software engineering, analytics and collaboration, in order to deliver reproducible, testable and auditable analysis pipelines. This pathway aims to provide a high-level understanding and hands on practice with open-source tools and approaches to develop automated high-quality reproducible research practices while removing any manual/semi-manual processes.

After completing the eight courses in this pathway, you should be able to:

- Demonstrate a hands-on understanding of open-source analytical tools for developing reusable automated data pipelines.
- Use GitHub to track changes made to the code in a collaborative development environment.
- Test, document and package code in R and Python using reproducible programming techniques.
- Understand the role of a continuous integration pipeline towards development, testing and integration automation in a collaborative environment.

Deciding which pathway to start with can sometimes feel confusing as trying to gauge if a course is pitched at the right level for you to build on your existing knowledge can be tricky.

To help you decide which pathway is right for you we have developed some useful personas.

Learning personas are designed to create a realistic representation of the intended learning audience which will help you identify what learning is best suited to you.

Personas are created based on a variety of information from pre and post course surveys, learning needs analysis as well as one to one feedback from course participants and information/observations from learners looking for a course.

The personas are designed to be relatable to you and will give you an idea of whether a pathway will not only be at the right level but will also help you achieve your learning goals.

Communicating Insights Persona

General background

Alex works in policy and uses data to inform his communications to stakeholders. He uses data insights to put forward proposals that will increase efficiency.

Starting point

Alex’s preferred method of communications is business papers, however, more recently there has been a push to make these shorter and move towards a more visual means of communication.

Perceived needs

Alex would like to learn more about statistical disclosure control as this is something he has never really considered in his communications and how to create an impactful message visually.

Special considerations

Alex works part-time due to caring responsibilities so would prefer online self-study courses to allow more flexibility.

Benefits of this course

This pathway will provide you with a basic understanding of risk and issues surrounding statistical disclosure, communicating quality, change and uncertainty as well as best practices of conveying your message using visual aids.

RAP Pathway persona

General Background: Sarah is an analyst who joined the analysis team a year ago.

Starting Point

Sarah attended an introduction to R course a year ago, and has been using R in her work ever since. Sarah is able to code, but she finds it hard to repeat and remember parts of her analysis months later.

Perceived Needs

Sarah produces the same quarterly report and would like to automate this and make quality assurance easier. She would like her colleagues to be able to use her code.

Special Considerations

Sarah doesn’t have a lot of time to invest in learning and would prefer not to read large amounts of text.

Benefits of this Course

This learning journey will help participants gain the technical tools and familiarity with best practice necessary to transform their work into Reproducible Analytical Pipelines (RAP)

To access the learning pathways, you will need a Learning Hub account. Email the team at gss.capability@statistics.gov.uk if you don’t already have an account.