National survey questions from - Non-degree Pathways into Data Analysis Careers

Standard and Demographic Questions
Pre-populated demographic characteristics (as the sample was constructed from a panel).
Age: 16-24, 25-34, 35-44, 45-54, 55+
Social Grade: ABC1, C2DE
Sex: Female, Male
Region: East Midlands, East of England, London, None, North East, North West, South East, South West, West Midlands, Yorkshire and the Humber

What ethnic group best describes you? Please select one option only.
(Structured for consistency with Census definitions.)

- ☐ English / Welsh / Scottish / Northern Irish / British
- ☐ Bangladeshi
- ☐ Irish
- ☐ Chinese
- ☐ Gypsy or Irish Traveller
- ☐ Any other Asian background
- ☐ Any other White background
- ☐ African
- ☐ White and Black Caribbean
- ☐ Caribbean
- ☐ White and Black African
- ☐ Any other Black / African / Caribbean background
- ☐ White and Asian
- ☐ Arab
- ☐ Any other Mixed / Multiple ethnic background
- ☐ Any other ethnic group
- ☐ Indian
- ☐ Pakistani
- ☐ Prefer not to say

Which of these applies to you?

- ☐ Working full time (30 or more hours per week)
- ☐ Working part time (8-29 hours a week)
- ☐ Working part time (Less than 8 hours a week)
- ☐ Full time student
- ☐ Retired
- ☐ Unemployed
- ☐ Not working
- ☐ Other

Regardless of the particular job that you do, in what industry does your company work?

- ☐ Accounting
- ☐ Agriculture (farming, livestock)
- ☐ Airlines or air travel
- ☐ Hotels or lodging
- ☐ Tourism / tour operator / travel agency
- ☐ Other travel services
- ☐ Arts, entertainment, and recreation
- ☐ Business services (e.g. accounting, consulting, advertising, business or market research)
- ☐ Construction

- ☐ Education
- ☐ Engineering, design, or architecture
- ☐ Financial Services: Banking
- ☐ Financial Services: Brokerage & Investment
- ☐ Financial Services: Insurance
- ☐ Financial Services: Other
- ☐ Health or medical services
- ☐ Law or legal services
- ☐ Leisure (gyms, fitness, sports, leisure centres etc.)
- ☐ Maintenance and repair
- ☐ Manufacturing: Automobiles or automobile-related
- ☐ Manufacturing: Heavy industry or machinery
- ☐ Manufacturing: Technology, computers, electronics
- ☐ Manufacturing: All other
- ☐ Media and communications
- ☐ Natural resources (e.g. oil, mining, forestry)
- ☐ Utilities and energy (e.g. electricity, water, gas etc.)
- ☐ Personal care and services
- ☐ Real estate
- ☐ Restaurant services
- ☐ Retail
- ☐ Scientific research
- ☐ Technology services
- ☐ Transportation
- ☐ Wholesaling
- ☐ Other
- ☐ Not applicable

Substantive Survey Questions

Q1) In which of the following ways, have you completed any training in statistics or data analysis?
(Please select all that apply)
If you have not completed any training in statistics or data analysis, please select the 'Not applicable' option.
If your training was overseas, please select the nearest equivalent.

- ☐ Don't know/can't recall

- ☐ Not applicable - I have not completed any training in statistics or data analysis

- ☐ Self-directed independent learning (e.g. YouTube, Stack Overflow, textbooks), or platform-based independent learning (e.g. Coursera, EDx)

- ☐ Data analysis/data science/coding Bootcamps

- ☐ In-house training through my employer

- ☐ Short courses or certifications (e.g. Royal Statistical Society, IBM, Google)

- ☐ O levels/IGCSE/GCSE

- ☐ A levels

- ☐ Level 3 Apprenticeship, or level 4 Apprenticeship

- ☐ Undergraduate degree or Degree Apprenticeship either with statistics or data science as the main subject, or as a course or module within another degree subject.

- ☐ Postgraduate degree (e.g. MA or PhD) either with statistics or data science as the main subject, or as a course or module within another degree subject.

☐	Other [open] please specify

Q2) Thinking about approaches to learn statistics and data analysis:
Which, if any of the following statements do you agree with? (Please select all that apply)

☐ I would consider doing an apprenticeship in data analysis

☐ Short training courses in statistics and data analysis are preferable to apprenticeships

☐ There is no need for most people to take formal training in statistics and data analysis because they can access freely available training resources online

☐ Learning statistics or data analysis at university is preferable to learning it through an apprenticeship

☐ Apprenticeships are best suited for people changing careers or for people that are new to the labour market

☐ Doing an apprenticeship is better than other types of training for someone starting out because it gives you work experience

☐ I am aware of my options for learning about statistics and data science (e.g. university, apprenticeships, T-levels, bootcamps, professional certifications, short courses)

☐ I don't have the aptitude for maths and statistics needed to do an apprenticeship in statistics or data science

☐ Apprenticeships are an appropriate pathway for people wanting to improve their data skills, even if data analysis isn't their main job. e.g. managers, people in sales

☐ I have heard of the new T-level qualifications

☐ None of these

☐ Don't know

Q3) Thinking about how statistics and data analysis might be relevant to your career now or in the future: Which, if any of the following statements would you agree with? (Please select all that apply)
[note: respondents indicating they had retired did not receive this question]

☐ If I need further training in statistics or data analysis, I'm confident I can weigh up my options for doing that training

☐ If I need further training in statistics or data analysis, I'm confident I can identify up my options for doing that training

☐ If I wanted further training, I would need good information about the specific skills I would learn through different training options

☐ I don't need to understand statistics and data analysis in my work

☐ I have all the statistics and data analysis skills I need for my work

☐ I expect that how we create and use data as a society will impact on how I do my job over the next 5-10 years

☐ I have all the skills I need to adapt to changes in my job caused by the way we create and use data as a society

☐ My employer would benefit from me doing further training in data analysis

☐ My employer would support me to do further training in data analysis

☐ None of these

☐ Don't know

Q4) For the following question, even if you're not currently working, please think about your most recent job: Which, if any, of the following tasks would you consider to be important for your work? (Please select all that apply)
If you've never worked, choose the 'Not Applicable' option below.

☐ Finding data from existing sources, and formatting it for analysis (e.g. exporting .csv or excel file from a database or downloading data from a website, and tidying it up so you can produce graphs)

☐ Summarising and explaining data (e.g. producing tables, charts and graphs)

☐ Combining different datasets together to support analysis (e.g. combining data from two separate spreadsheets)

☐ Carrying out basic analysis to identify trends and patterns in the data (e.g. weekly, monthly, or seasonal trends

☐ Checking for errors in the data and analysis by comparing different outputs (e.g. are there duplicates, too many results, proportions not adding to 100%)

☐ Clearly communicating and explaining the data and the results of analysis, either verbally or in writing (e.g. writing reports, preparing and or delivering presentations)

☐ Storing, managing and distributing data and analysis in compliance with data security standards and legislation, and organisational requirements (e.g. saving data securely, making sure that privacy standards are maintained)

☐ Operating as part of a multi-functional team, and prioritising work within the context of a project (e.g. one person extracting and preparing data, another doing the analysis, and another preparing advice and reports)

☐ Reviewing your data skills needs, and keeping up to date with developments in technologies and trends (e.g. identify you may need upskilling in a particular area)

☐ Cleaning data, and testing and assessing your confidence in the data and its integrity (e.g. remove duplicates, typos, duplicate entries, check for out of date data, parse data - format telephone numbers according to a national standard)

☐ None of these

☐ Don't know

☐ Not applicable - I have never worked

Q5) Thinking about dealing with statistics and data as part of your job, your education, or outside of work in day-to-day life: Which, if any, of the following tasks are you confident you can perform? (Please select all that apply)

☐ Finding data from existing sources, and formatting it for analysis (e.g. exporting .csv or excel file from a database or downloading data from a website, and tidying it up so you can produce graphs)

☐ Summarising and explaining data (e.g. producing tables, charts and graphs, etc.)

☐ Combining different datasets together to support analysis (e.g. combining data from two separate spreadsheets)

☐ Carrying out basic analysis to identify trends and patterns in the data (e.g. weekly, monthly, or seasonal trends)

☐ Checking for errors in the data and analysis by comparing different outputs (e.g. are there duplicates, too many results, proportions not adding to 100%)

☐ Clearly communicating and explaining the data and the results of analysis, either verbally or in writing (e.g. writing reports, preparing and or delivering presentations)

- ☐ Storing, managing and distributing data and analysis in compliance with data security standards and legislation, and organisational requirements (e.g. saving data securely, making sure that privacy standards are maintained)

- ☐ Operating as part of a multi-functional team, and prioritising work within the context of a project (e.g. one person extracting and preparing data, another doing the analysis, and another preparing advice and reports)

- ☐ Reviewing your data skills needs, and keeping up to date with developments in technologies and trends (e.g. identify you may need upskilling in a particular area)

- ☐ Cleaning data, and testing and assessing your confidence in the data and its integrity (e.g. remove duplicates, typos, duplicate entries, check for out of date data, parse data - format telephone numbers according to a national standard)

- ☐ None of these

- ☐ Don't know

Q6) Which, if any, of the following factors would encourage you to enrol in a Level 3 Data Technician Apprenticeship? (Please select all that apply)
A Level 3 Data Technician apprenticeship is a qualification that you complete as part of your job, mostly funded by the government, at approximately the same level as A levels. They are designed to equip learners with the knowledge and skills to work with and analyse data.

- ☐ If I could tailor the training so that the skills were relevant for my specific situation

- ☐ Access to good information about how doing an apprenticeship would affect my income in the long term

- ☐ If training was available on a flexible basis so I could work around my personal commitments

- ☐ If training was available online

- ☐ If training was available in my region

- ☐ If there were other people in my age group or career stage also doing it

- ☐ If I could apply the skills I was learning to my current job

- ☐ The perceptions my family have of apprenticeships

- ☐ The perceptions my friends have of apprenticeships

- ☐ Other factors

- ☐ Don't know

- ☐ Not applicable - nothing would encourage me to enrol in a level 3 data analysis apprenticeship

Q7) Which, if any, of the following factors would discourage you from enrolling in a Level 3 Data Technician Apprenticeship?
(Please select all that apply)

- ☐ I don't have sufficient interest in statistics and data science

- ☐ I don't have the aptitude for statistics and data science

- ☐ I think that doing apprenticeship would feel like going backwards at this stage in my career

- ☐ If training was not available in my region

- ☐ If training was not available online

- ☐ If training was not available on a flexible basis so I could work around my personal commitments

- ☐ If I had to earn apprentice wages while in training (minimum of £5.28 per hour in the first year, and up to £10.42 per hour in the second year, depending on your age and the year of your apprenticeship)

- ☐ The length of time it takes to complete an apprenticeship is too long

- ☐ The perceptions my family have of apprenticeships

- ☐ The perceptions my friends have of apprenticeships

- ☐ Other factors

- ☐ Don't know

- ☐ Not applicable - nothing would discourage me from enrolling in a Level 3 Data Technician apprenticeship