Digital skills by employment sector

Discover the skills most in demand according to LSE graduates

Contents

Overview

The document is designed to help students understand what digital skills are in demand in various employment sectors based on the results of the recent Change Maker's project: **Graduate Digital Skills**, undertaken by LSE project researchers.

The sectors reflect the results of the **project report** and link to the learning opportunities offered by the **Digital Skills Lab**.

The aim is for students to identify gaps in their knowledge and gain the skills and competencies that will enhance their graduate employability.

If you have any questions or feedback on this document, please email digital.skills.lab@lse.ac.uk.

Researchers

Sectors: Research, market research, education and teaching

Top skill clusters: Data Visualisation; Productivity / Office Applications; Data Science and Analytics

Typical job titles: Research Assistant, Data Analyst, Operations Manager

Key skills:
Excel: basic analysis and preparing data

Microsoft Office: formatting features

R: visualising and modelling data

SQL: complimentary tool for big data

Excel skills that will come into use are basic Excel 'hygiene' skills (Excel 1-3) such as freeze panes, and big data analysis such as pivot tables (Excel 4b and 5b), sorting and filtering and dynamic sorting and filtering (Excel 4c and Excel 5c), power pivot (Excel 5b), lookup functions (Excel 4a and 5a) .

To present and report findings, Word and PowerPoint skills would prove useful such as formatting documents/presentations, line-spacing, alignment, different pasting types, SmartArt, referencing tools, tables, printing and sharing, inserting images, track changes, commenting.

Useful R libraries to have a hold on are ggplot and ggplot 2 for data visualisation, tidyverse, cater and rmarkdown for recording operations and rshiny for displaying results.

Knowledge of SQL would be useful to pull together multiple datasets (using shared keys), to handle and clean large data sets (more efficient than Python and R), to complete full analysis, and to combine R and SQL together.

NGOs and Public Affairs

Sectors: NGOs, International Development, Charities, PR & Communications, Marketing, Environment

Top skill clusters: Productivity / Office Applications; Digital Marketing; Data Visualisation; Data Science and Analytics

Typical job titles: Administrator, Fundraiser, Research Assistant

Key skills: Excel: versatile tool for project management and data

Microsoft Office: formatting and collaboration

Salesforce: managing fundraising efficiently

In this sector, important Excel skills to grasp are: Conditional formatting (Excel 3), conditional IF functions and VLOOKUP (Excel 4a, Excel 5a), data analysis tools such as pivot tables (Excel 4b) and sorting and filtering (Excel 4c), data visualisation tools (Excel 4d and 5d), goal seeking (Excel 4f) and Macros and VBA (Excel 6).

Other useful digital skills in this sector include Word for writing reports and briefs, formatting, sharing, commenting and track changes (Word 1) and Salesforce (which is not currently taught by the DSL).

Policy and Government

Sectors: Policy, Government

Top skill clusters: Productivity / Office Applications; Data Science and Analytics; Data Visualisation

Typical job titles: Research Analysts/Associates, Economists, Policy Advisors

Key skills: Data visualisation skills

Digital designing skills

Data management using R

Helpful Excel skills include data visualisation (Excel 4d and 5d) and data analysis, so functionalities such as lookup functions (Excel 4a and Excel 5a), pivot tables (Excel 4b) and sorting and filtering (Excel 4c and 5c). Knowledge of Power BI is also beneficial.

R is a beneficial skill to grasp, specifically to automate tasks such as downloading datasets, running statistic regressions and calculating summary statistics. Additionally, Stata is useful in order to make statistical calculations and panel-regressions.

Digital design is a commonly used skill as well, for instance platforms such as Canva, Adobe InDesign and Photoshop, however these are not currently taught by the DSL.

Information Technology

Sectors: Information and Digital Technology

Top skill clusters: Productivity / Office Applications; Data Science and Analytics; Data Visualisation

Typical job titles: Data Scientists/Analysts, Software/Product Engineers

Key skills: SQL is highly essential

Tableau and Power BI are powerful and often used data visualization tools

Python is a versatile language with broad applicability

Excel is important

In the Information Technology sector, SQL is convenient to query data and manage large databases (construction and maintenance).

Power BI and PowerPoint are used to create and present visualisations to tell a story to end users.

Python's broad applications are useful in this sector, specifically for cleaning and mining data (especially used with large datasets) and web-scraping and automation functions that enhance work productivity. Some Python packages used include NumPy, pandas and matplotlib.

Beneficial Excel skills include data visualisation (Excel 4d and 5d), pivot tables (Excel 4b) and conditional IF functions and VLOOKUP (Excel 4a and 5a).

Consulting

Sectors: Consulting

Top skill clusters: Productivity / Office Applications; Data Science and Analytics; Data Visualisation

Typical job titles: Consultant, Senior Consultant, Manager

Key skills: Excel as a data handling and model building tool

Microsoft Office (excluding Excel and Access) as a communication and organizational tool

Useful Excel skills in the Consulting sector include pivot tables and charts (Excel 4b, 4d and 5d), filtering (Excel 4c), lookup functions (Excel 4a and 5a) and model building using VBA (Excel 6).

PowerPoint and Word are used to visualise data in presentations, communicate key messages, link tables/charts with Excel and draft business documents such as letters or proposals.

Power BI is used for storytelling purposes, building dashboards and supplying analysis to a wider audience.

Finance

Sectors: Banking, Finance

Top skill clusters: Productivity / Office Applications; Data Visualisation; Data Science and Analytics

Typical job titles: Analysts

Key skills: Excel as a model builder and data management tool

Microsoft Office (excluding Excel) as a communication and organizational tool

SQL deployed as a complementary tool for large datasets

In this sector, important Excel skills to grasp are pivot tables (Excel 4b), lookup functions (Excel 4a and 5a), data visualisations (Excel 4d and 5d) and VBA to make repetitive tasks easier (Excel 6).

PowerPoint is used for data visualisation, creating impactful slides and linking graphs/tables to Excel, and Word is important for drafting various business documents such as client letters or proposals.

Python is increasingly being used in this sector to assist with everyday tasks. Common packages used as substitutes for the typical Excel math and matching functions include panda, NumPy and matplotlib as they have a computational power advantage.

While use of SQL is limited, it is still helpful to know how to extract data, as well as calculate and summarise data.

Retail and Manufacturing

Sectors: Retail, manufacturing

Top skill clusters: Data Visualisation; Productivity / Office Applications; Data Science and Analytics

Key skills: Excel as a data management tool

Microsoft Office (excluding Excel) as a communication and organizational tool

SAP is essential

In this sector, useful [Excel](#) skills to know are data analysis tools such as lookup functions (Excel 4a and 5a), pivot tables (Excel 4b) and sorting and filtering (Excel 4c and 5c), along with data visualisation tools (Excel 4d and 5d).

PowerPoint is key to create impactful slides, represent data and link graphs and charts to Excel. Word is useful for drafting business documents and reports.

Additionally, SAP is a commonly used software, however it is not currently taught by the DSL.

Digital Skills Lab

Develop key skills employers want

- **Attend a workshop**
  Sessions run daily online and on campus

- **Study online in your own time via Moodle**
  Study what you want, when you want

- **Find out how we can support you with your digital skills learning**
  For more information on our website

- **Follow us on social media, Student Hub and join our mailing list**
  For news of upcoming events and learning opportunities

"The skills workshops for Excel are a great way to prepare you for the job market. Becoming fluent in Excel contributes to your employability and also enables you to utilize Excel to optimize your personal organization (budgeting, career planning, etc)."

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