

Resources for Biomedical Data Scientists

Using this resource

Here is a list of resources to help support you in your career. Each resource has a short description and indicates who might find it helpful. Many of these communities are very open to supporting anyone who feels they fit within their remit, so if in doubt please reach out to them.

Useful Acronyms:

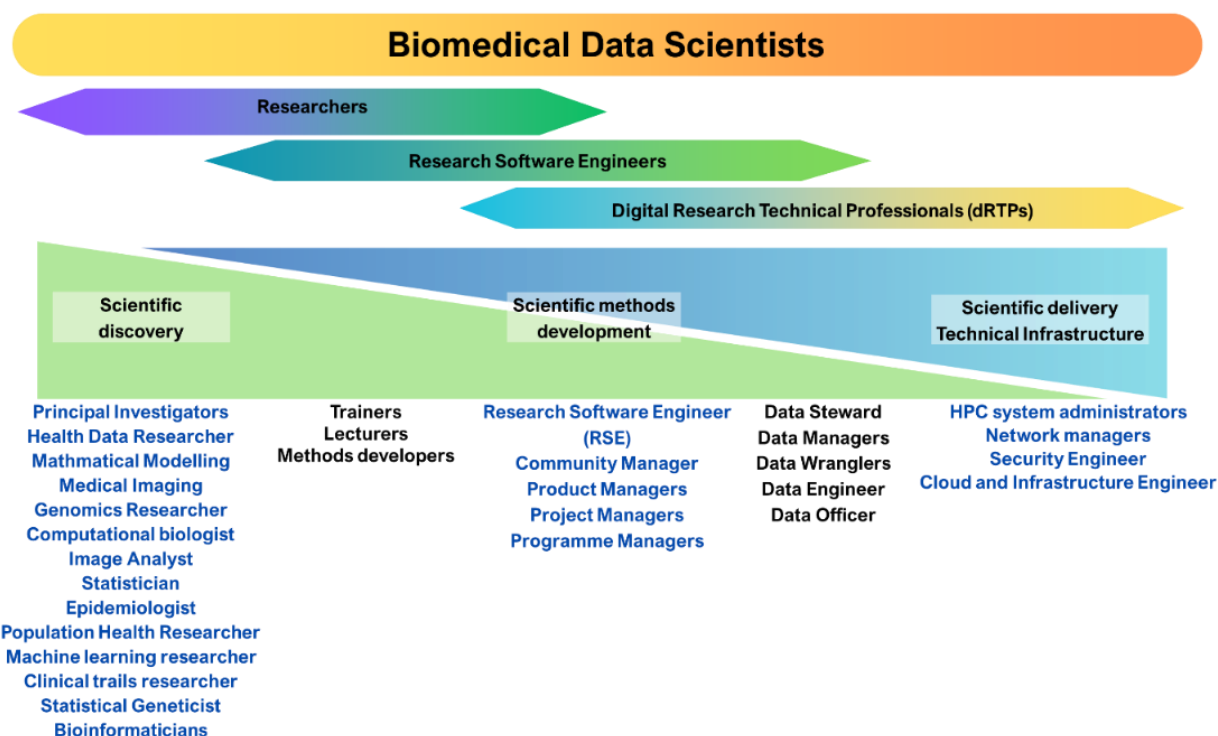
- **dRTP:** Digital Research Technical Professional
- **RSE:** Research Software Engineer
- **DRI:** Digital Research Infrastructure
- **HPC:** High Performance Computing
- **FAIR Data:** Findable, Accessible, Interoperable, Reusable Data

If there are resources of support that have been really helpful to you but are not represented below, please get in touch and let us know at integrate@imm.ox.ac.uk

This is an active project and will be updated over time – please find the live version at <https://integrate-bio.org/resources/list>

Roles in Biomedical Data Science

Biomedical data science is very board term and encompasses many different roles vital for scientific delivery and innovation. Below is a diagram of some of the vast range of data roles that exist to help you to think about where you might fit within the broader categories and terminologies of roles that are being used by communities, funders and in the wider landscape (e.g. Researchers versus dRTP).



This list is not exhaustive, but is designed to highlight the breadth of roles and broader staff groups that exist within this space and where you might find support for different functions of your role, please get in touch if there are other roles or job functions you would like to see added.

Communities

Below is a list of UK-wide and international communities which you may be interested in joining. While we have tried to include a diverse range of communities, we are aware we that we won't have captured everything and many local opportunities may also be available to you. It is also worth noting that many domain-specific societies also have special interest groups relating to areas of data science, such as the Mathematical Modeling affinity group in the British Society of Immunology.

Name	Description	Link
Society of Research Software Engineering Audience: All - particularly helpful for those in method development and data/software engineering	A society for those working in roles relating to research software engineering.	https://society-rse.org/
Turing Way Audience: All - particularly useful for those wanting to connect to wider landscape.	A slack channel which accompanies the Turing Way handbook, which promotes reproducible, ethical and collaborative data science. It is an open space for asking questions, learning about other's work, and finding out about related events and projects associated with the Turing Way.	https://book.the-turing-way.org/community-handbook/communication-channels/slack-welcome-guide/
Bioconductor Audience: All – particularly good for those in research roles	A diverse, collaborative and welcoming community that aims to train all levels in computational research and develop, support and disseminate free open-source software for biological data analysis. Bioconductor runs a free and active community on Zulip.	https://bioconductor.org/about/
Cancer Research UK Data Science Community Audience: All	A slack channel welcoming all those interested in data driven approaches to cancer research.	https://www.cancerresearchuk.org/for-researchers/our-research-strategy/research-data/data-interest-groups
BioFAIR Audience: All	An emerging community to bring together those working to make biological data more Findable, Accessible, Interoperable and Reusable.	https://biofair.uk/
AI in the Biosciences (AIBIO) Audience: All	A community building project supporting AI in the biosciences.	https://aibio.ac.uk/
Health Data Research UK	The national institute for Health Data Science in the UK	https://www.hdr.uk.ac.uk/



Audience: All Computational Abilities Knowledge Exchange (CAKE) Audience: Digital Research Technical Professionals, those working with digital research infrastructure e.g. HPC	Facilitates knowledge exchange and collaboration across the digital research infrastructure (DRI) communities across the UK.	https://www.cake.ac.uk/
ELIXIR Audience: All	ELIXIR coordinates and develops life science resources and training across Europe so that researchers can more easily find, analyse and share data, exchange expertise, and implement best practices. ELIXIR runs regular community calls with multiple interest groups around specific areas. To find out if your institution is a member, see: https://elixir-europe.org/about-us/who-we-are/nodes/uk	https://elixir-europe.org/

Resource Hubs

Name	Description	Link
Health Data Research UK Futures platform Audience: All	Futures, powered by HDR UK is the UK's national learning platform for health data science, offering free, flexible learning to help researchers, healthcare professionals and data scientists develop skills in areas such as AI, programming, statistics and research methods. Learners can also explore our new career pathways, which showcase different career options in health data science and recommend relevant training to support progression. Popular courses include <i>Bringing Software as a Medical Device to Market</i> , <i>Data Visualisation in the Health and Care Sector</i> and <i>Distributed Computing for Health Data</i> . In addition to self-paced learning, HDR UK also offers a range of live webinars, workshops and events, which can be viewed on the HDR UK Events page .	https://hdruklearn.org/
Computational Abilities Knowledge Exchange (CAKE) Audience: Digital Research Technical Professionals, those working with digital research infrastructure	Facilitates knowledge exchange and collaboration across the digital research infrastructure (DRI) communities across the UK. Signposts to funding opportunities, events, and other initiatives within the DRI space.	https://www.cake.ac.uk/
ELIXIR Audience: All	ELIXIR coordinates and develops life science resources across Europe so that researchers can more easily find, analyse and share data, exchange expertise, and implement best practices. As well as linking to many helpful resources, ELIXIR also runs a flexible bursary scheme to support activities by those in the community. Membership is free for those in member organisations. To find out if your institution is a member, see: https://elixir-europe.org/about-us/who-we-are/nodes/uk	https://elixir-europe.org/
Software Sustainability Institute (SSI) Audience: All	The UK national institute for research software. The SSI hosts various resources for training around research software, and also provides funding opportunities such as the Software maintenance fund, and SSI fellowships.	https://www.software.ac.uk/

PEDRI (Public Engagement in Data Research Initiative) Audience: All	Training and resources to help guide public engagement activities around the subject of data research	https://www.pedri.org.uk/resources-hub/tools-and-guidance/
Valuing Voices Audience: All - Particularly helpful for those planning collaborative grants	A tool and resource hub to help you plan and deliver equitable collaborative research projects.	https://valuing-voices.ac.uk/

Career Development Resources

Name	Description	Link
DIRECT Framework Audience: All	The Digital Research Competencies (DIRECT) Framework was designed to help you to identify skills, define development pathways and progress your career in research software.	https://directframework.com/
EMBL-EBI Core Competencies Audience: All	A competency framework encompassing multiple data-based roles to help you understand the skills and training you might find helpful to progress in your chosen career path.	https://competency.ebi.ac.uk/
Liston Lab Careers resources Audience: All – particularly useful for those in research focused roles	Resources from the lab of Adrian Liston at the University of Cambridge covering a variety of topics from building a diverse and productive lab team, to juggling motherhood and science.	https://www.listonlab.uk/careers/