

A career timeline: academia to the NHS

Dr Lisa Hopcroft

UofG CompBio meet up, October 2024

Who am I?






- Senior Technical Consultant at [National Service Scotland](#)
We provide services and advice to the NHS and wider public sector
- Building data products for NHS in Scotland via [Seer platform](#)
 - Vaccinations, screening programme data, cancer intelligence data, etc...
 - Data engineering: databases, ETL, data virtualisation, dashboards
 - Increasingly cloud based

Academic career (on paper)

- **2000-2009: Education**
 - BSc AI & Psychology → MRes Bioinformatics → PhD Bioinformatics
- **2009-2017: Postdoc-ing**
 - short/longer term contracts in University of Glasgow
 - inspirational and very encouraging mentor (Prof Tessa Holyoake)
 - good publication record (✨ Nature paper ✨)
- **2017-2018: Research fellow**
 - won two research fellowships (5 years)
 - money for PhD students and staff






Academic career (behind the scenes)

I felt...









- No conscious career decisions 
- One (undesirable) career trajectory 
- Didn't want to give up  for  
- Didn't know what else I could do
- Half hearted job apps had failed

Academic career (behind the scenes)

I felt...

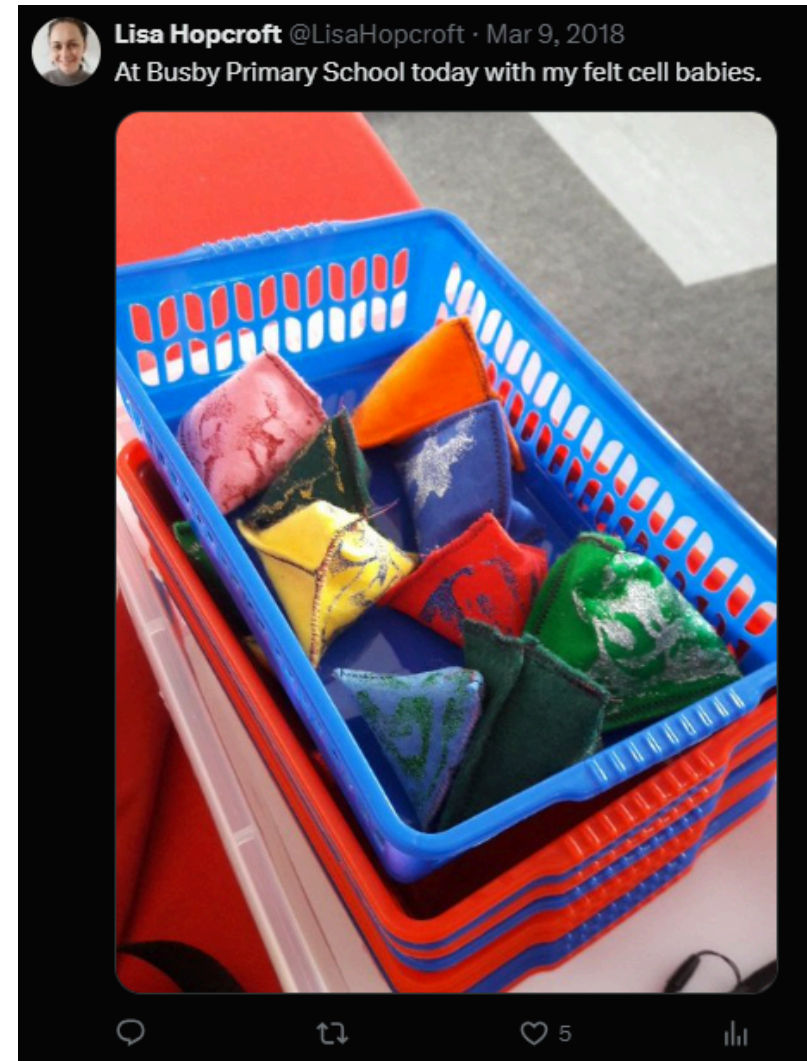
- No conscious career decisions 
- One (undesirable) career trajectory 
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But...

- I enjoyed collaborative work 
- I enjoyed communication   
- Drip feed of rewards   
- ...
- I didn't *HATE* it all the time 

The tipping point: 9th March 2018

- Completely energising STEM visit to a primary school
- Dropped **ABSOLUTELY EVERYTHING**, applied for PGDE (Computing)



The slow realisation...

- I enjoyed the teaching...and I was good at it
- I did not enjoy the teaching admin
- I really, *really*, **really** missed the data and the coding

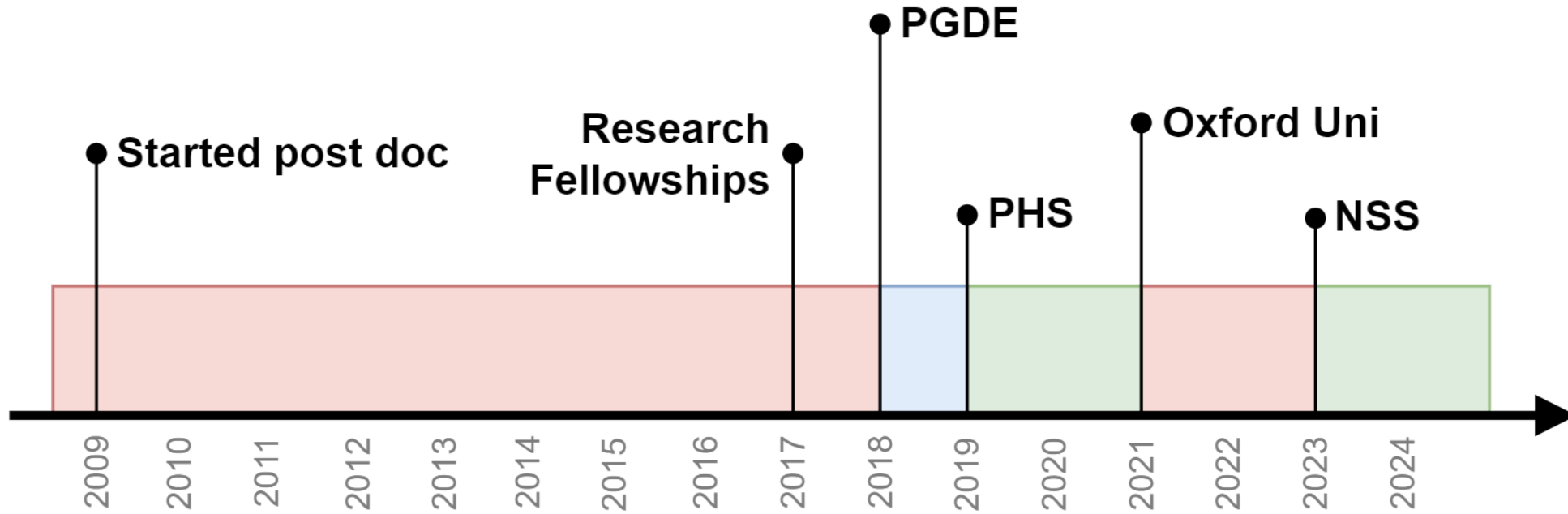
Health data science

- **2019-2021: Public Health Scotland**
 - Generic recruitment round for Principal Information Analyst
 - They wanted R skills and familiarity with clinical research
 - Freedom to build a robust system to report on clinical trials
- **2021-2023: University of Oxford**
 - Data scientist at OpenSafely (Prof Ben Goldacre)
 - Working with software engineers and using Python
 - "Start up" mentality - we were on a mission

Health data science

- 2023-present: National Services Scotland
 - Senior Technical Consultant
 - Developing and maintaining data products used across the NHS
 - First experience of:
 - strict development pipeline (dev → UAT → production)
 - enterprise-level business intelligence
 - service delivery - the NHS *relies* on our service being available
 - business analysis/requirements capture

Recap



Industry vs academia (vs public services)

- There are no hard and fast rules, but...
 - Academia does not have a monopoly on hard and important problems
 - Large organisations offer the possibility to try something new with less risk
 - Large organisations can be frustratingly slow to modernize
 - Workplace culture can vary dramatically and it is important
 - Academia gives you *a lot* of transferable skills

What have been the most influential events

- Leaving academia for teaching
 - taking control and making a decision for myself
- Realising just how much I enjoyed coding and working with data
- Working with software developers
- Learning about the software development cycle (including tests 🧪)

What I do now

- Regularly reflect on where I am and what I want (diarise!)
- Move on when I feel I have learned all (most) that I can

Advice

- Try to reflect as much as you can, preferably from a distance
 - what do you enjoy?
 - how do you like to work?
 - what do you want to learn?
 - what gives you energy?
- Be confident that you have skills that are needed elsewhere
- Be brave
-

In retrospect, what was energising was the coaching and communication aspect of this. Being out in the world.

- Career talk
 - Put these slides on Github as pages
 - Notes
 - My academic history - undergrad, masters, PhD (was on a treadmill - felt like I had a plan)
 - After PhD, I had a brief look at jobs, but didn't really know what I was looking for and the first opportunity that arose was a postdoc (through conversation with a visiting lecturer)
 - What this doesn't convey is that throughout this time, I was at various stages of frustration/desperation to leave academia - I'd applied for jobs
 - I knew that I didn't really have the group leader mentality - I wasn't driven by the research questions - I was driven by the process of working together to build something (not easy to tell the difference when you're working in)