

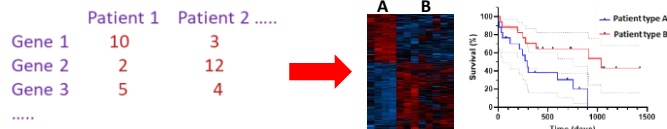
Careers in perspective: Bioinformatician

What is a bioinformatician?

- **Bioinformatics:** A field that uses computers to understand biological data

- **Role of bioinformaticians can vary, they can:**

- Analyse and visualise complex big datasets in a meaningful manner



- Create databases, tools or software



- But they all use computer programming languages to handle data or build tools/software

- Examples: R and python



What is personalised medicine?

- Big biological datasets can be used to understand the mechanisms of disease and so leads to personalised medicine

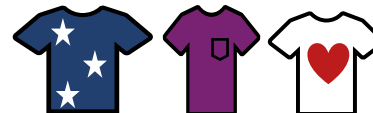
- **Personalised medicine:** tailoring treatment to an individual

- Everyone's genetic/molecular makeup is different



- So the same disease will progress and respond to treatment differently for certain individuals

- It's like how different shoppers get different t-shirts- you certainly will not get the same style/size as your parents!



How do I get into Bioinformatics?

- You don't need a Bioinformatics degree- People's background can range from biology, computer science or maths

- **All you need to know is how to code, handle data and think scientifically**

(Personally, I studied Biochemistry and did a PhD in cancer biology where I did some bioinformatics but a PhD is not a necessity for non-academic jobs)

Useful links/resources

Learn to code game apps: <https://www.programming-hero.com/>, Codemurai, <https://www.sololearn.com/>

Tutorials: <https://www.codecademy.com>, <https://rstudio-education.github.io/hopr/index.html> (R), <https://python.swaroopch.com/> (python),

Bioinformatic tools examples:

<https://www.ebi.ac.uk/services/data-resources-and-tools>