

Diverse CDT: Innovative Programme Design for Widening Participation

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<https://diverse-cdt.ac.uk>

Diverse CDT

A doctoral training programme focused on diverse approaches to data visualization and on increasing diversity in doctoral education

Addressing data challenges and skills gap in data visualization and barriers to doctoral education

Co-created with current and former PhD students, potential partners, academic colleagues

Delivered by City St George's and University of Warwick; funded by the EPSRC as one of the “innovative” CDTs

Diverse CDT

60 PhD students, 5 cohorts from October 2025

Full-time students have a 4-year programme

Year 1 has strong training focus; years 2 – 4 are PhD study through connected research projects

Removing documented barriers to inclusion of all kinds of people

Programme Design to Widen Participation

Addressing significant obstacles for many potential applicants to PhD-level study.

- No **research proposal at application stage**
- no requirement for **acceptance by a supervisor** (connection, gatekeeping)
- foundational **skills training** for 6 months in year 1, open to students from **diverse disciplinary backgrounds**
- **Competency and curiosity-led** recruitment



Doctoral Researchers - Diverse CDT



Sabah Azhar

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: psychology; mental health; data-led social change; accessibility



Blazej Jan Barski

PhD student at Diverse CDT, based at City St George's, University of London

Interests: geography; GIS; spatial data visualization; quantitative analysis; technological innovation; policy



Fiona Chung

PhD student at Diverse CDT, based at the University of Warwick

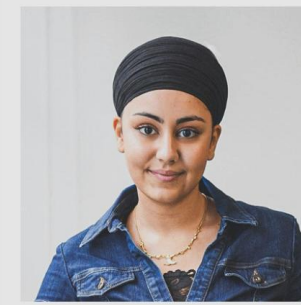
Interests: visual storytelling; collaborative design; lived experience; accessibility; LGBT+ advocacy



Katie Grieve

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: data analysis; mathematics; heritage; visual storytelling; inequalities



Gursav Kaur

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: psychology; AI; technology; statistical analysis; data storytelling; programming



Ana Marques

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: digital accessibility; science communication; data storytelling; data humanism; creative health



Isaac Ojo

PhD Student at Diverse-CDT, based at City St George's, University of London

Interests: visual storytelling; migration; wellbeing; photography; economics



Tobi Oke

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: biology; biomedical research; evidence-led decision making; data accessibility; health literacy



Sian Phillips

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: data humanism; data feminism; statistical analysis; social change



Rohan Ram

PhD student at Diverse CDT, based at University of Warwick

Interests: cultural heritage; representation; data storytelling; creative industries

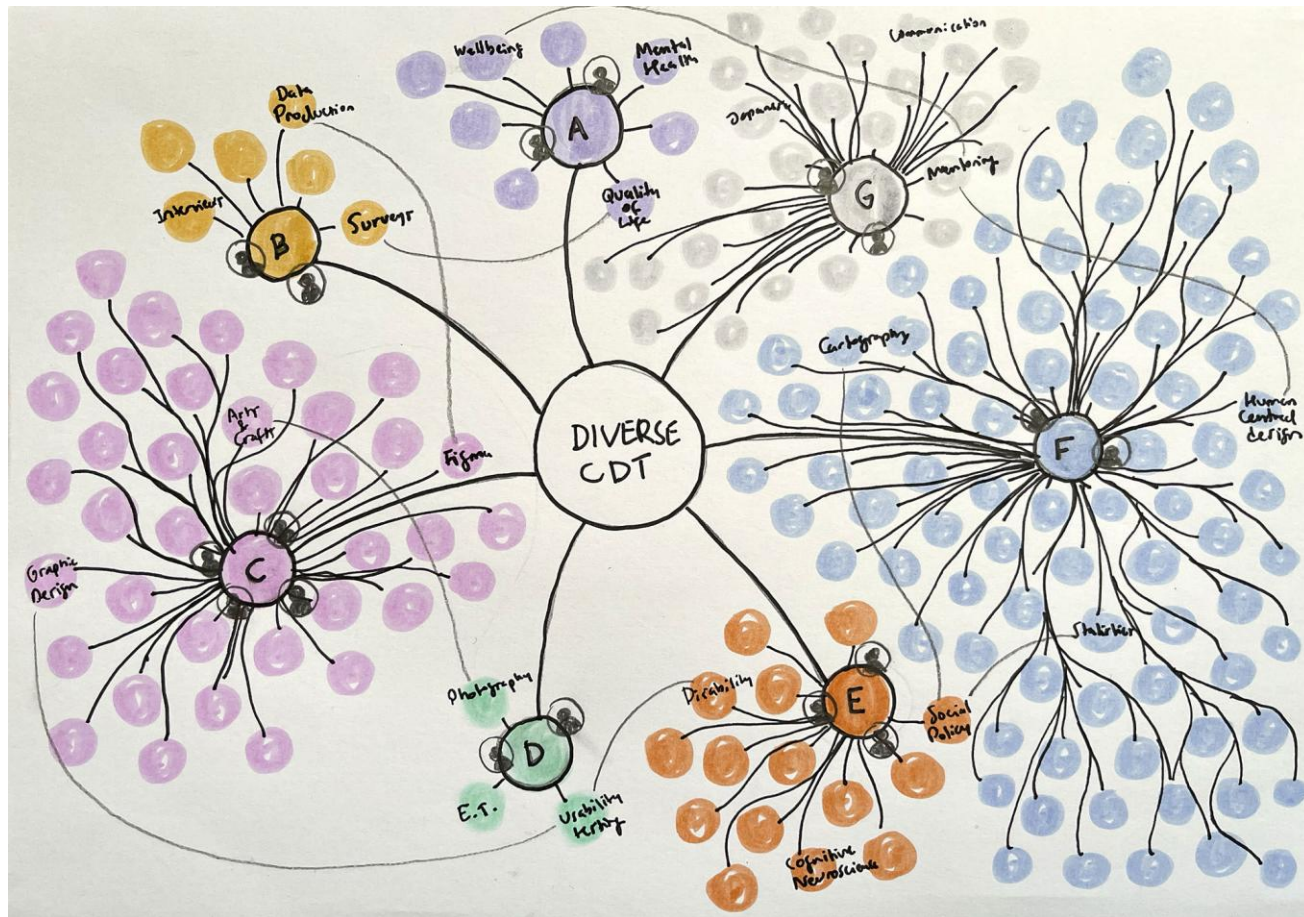


Beth Taylor

PhD Student at Diverse CDT, based at City St George's, University of London

Interests: data literacy; cultural heritage; national statistics; public sector analysis

Diverse Academic Domains



- Economics
- Graphic Design
- Human-Computer Interaction
- Illustration
- Mathematics
- Philosophy
- Photography
- Psychology
- Public Health
- Statistics
- User-Experience, etc.

PhD by Structured Components

A PhD via structured components:

- “Internship” projects with partners (academic, industry, international labs)
- Breaks down daunting thesis into components
- Synthesising, reflective narrative to connect components

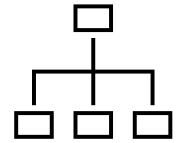
Delayed decision on over-arching approach:

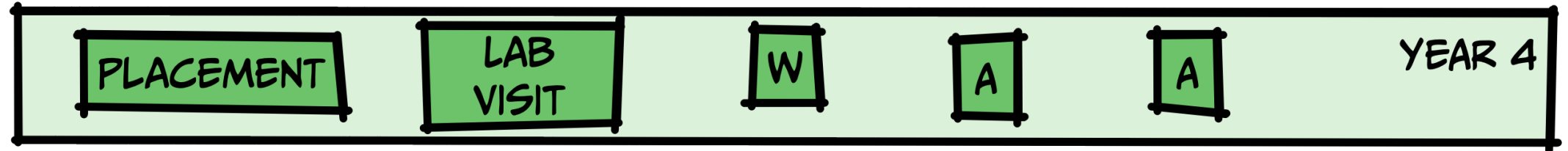
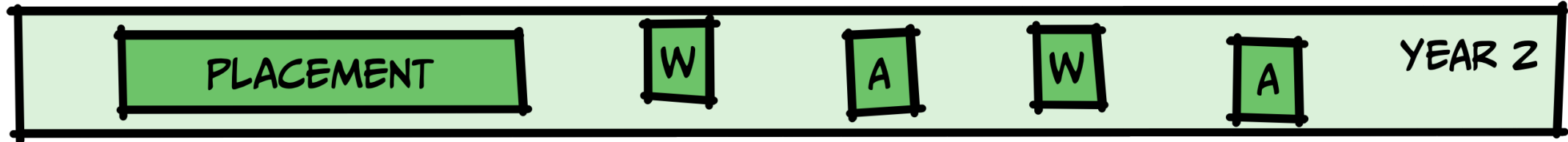
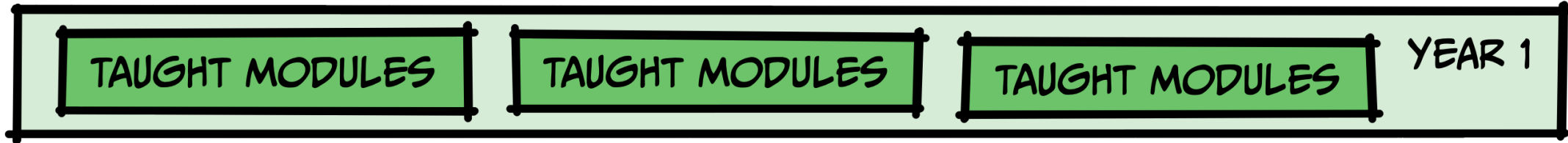
“lens thinking” and project choices in months 7-10.

Maps well into discipline of how data vis intersects with many disciplines.

Personal tutor in year 1; PhD supervisors in years 2-4.

Finance: everyone receives the same level of support regardless of external project partners’ resource





Digital Notebook Thesis

- Incremental: version control and documentation of process.
- Interactive “notebook”, with lit review, code, analysis and reflection.
- Culminates in a digital thesis.
- Uses Observable Digital Notebooks

1.1 Levels of Measurement

Properties of Data : Levels of Measurement
after Stevens (1946)

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<a href="https://jsndyks.github.io/diverse-cdt/img/design/dataVisDesign.02.lomStevens.png"></a>
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Version history

Mar 23

- 16:09 Named designGui... v326

Mar 4

- 13:44 Unpinned ### Ar... v325
- 13:44 Edited artefact02 v324
- 10:28 Named artefact1 v303
- 10:26 Edited ### Artef... v302

Feb 17

Datavis Design
Unlisted
You viewed Mar 30

Artefact 3 - Gestalt in the wild
Team
You viewed Mar 30

Artefact 4 - Cartograms
Team
You viewed Mar 30

Research Focus and Plans

1. Lens Focus
Identify two or three lenses as a possible focus for your ongoing research. Document your selected lenses, explain why they interest you, and evaluate the opportunities and/or limitations of each.
Consider how these lenses might work together: what possibilities, challenges, and contradictions might that effect?
Support and explore your choice of lenses with reference to and evaluation of existing research, practice, and application.

2. Research Pathway
Describe what you would like to achieve during the 2-3 research projects you will undertake in your PhD.

UDI.

Recruitment Process

- Staggered application deadlines (January, March, May)
- Structured application form with questions about:
 - Visualization
 - Research
 - Motivation
 - Project delivery
 - Cohort working
 - Why a PhD, why now?
- No project outline or personal statement.
- Targeted advertising and welcoming statements to invite applications from people who may not see themselves as PhD applicants/candidates
- Collaboration with ColorinTech, In2Science,
- Promotion to students in Universities that are often excluded from the PhD recruitment pipeline.

Competency and Curiosity-led Recruitment

When shortlisting, our panellists...

Could see

- Responses to structured questions about interest and experience.
- First degree and (if held) Master's degree subject(s)
- Work experience and skills.

Couldn't see

- Degree classification
- University attended
- Demographic info (age, gender, ethnicity, disability, neurodivergence, socio-economic background, caring responsibilities)
- Identifying details (name, contact details, previous employers, references).

Why?

'Look, for PhDs we have to be much more selective. We only recruit first-class graduates from a few well-established programmes (Imperial, UCL, Oxbridge), and someone we know needs to vouch for them.'

(Anon, EPSRC CDT Directors' Meeting 2026)

Bottle-necking participation

Indicative of low confidence in ability to identify competency without prestige

Impact on Shortlist: Strength of Application

- Application strength was wide-ranging, regardless of previous education background.
- As an innovative CDT, we wanted applicants motivated to complete the unique type of PhD programme we offer.
- Evident when project proposals and personal statements were adapted from conventional PhD applications.

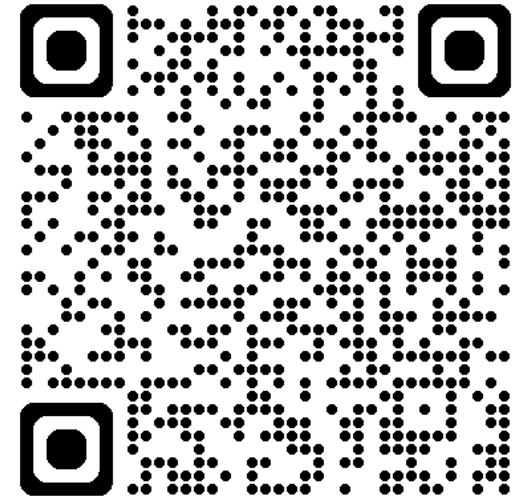


Beyond Recruitment...



Supporting student retention through:

- Research community
- Flexibility of project scope and scale
- Resources to stay the course
- Component research aligned to individual strengths and motivations



change what we can see

see what we can change