

DIVERSE-CDT

A CALL TO ACTION JOIN US IN TRAINING A DIVERSE GENERATION OF VISUAL DATA SCIENTISTS

The Engineering & Physical Sciences Research Council (EPSRC) is inviting bids to fund a series of **Centres for Doctoral Training (CDTs)** to meet skills needs. **City, University of London**, and the **University of Warwick** are proposing an innovative **CDT for Diversity in Data Visualization** that will leverage funding from the EPSRC, the Universities and partners to:

- develop effective approaches to data analysis - identifying and creatively solve data problems & understanding solutions
- train data analysts in innovative visual methods - upskilling a generation of data scientists in diverse methods & domains
- make data science research attractive to a diverse body of analysts & researchers - improving diversity in data science
- work with a diverse set of partners to develop the centre - addressing the skills shortage & working on real world problems

We are looking partners in industry, the charitable & not-for-profit sectors, to help us make the training programme happen.

We seek collaborators who can work with us to **identify skills needs**, **shape the training programme**, or **contribute directly** (by part funding PhDs) or **in kind** (through mentoring, data sharing, setting data challenges or hosting internships).

Please contact the academic leads

to discuss things further:

- > **Steph** or **Jason** at City,
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THE DETAILS ... HOW DOES IT WORK? WHY IS IT IMPORTANT?

What is a CDT?

CDTs are government backed collaborations between educational, industrial and other organisations to coordinate knowledge, resources and expertise for research training. They fund and develop focussed cohorts of PhD students, help them acquire specialised skills and support them in identifying and studying related research topics and employment.

What is DIVERSE-CDT?

The *EPSRC Centre for Doctoral Training in Diversity in Data Visualization* is a proposal for an innovative new CDT intended to change the way data are used in science, industry and society. We will develop knowledge, skills, capacity & connections that pioneer the use of *Interactive Data Visualization for Exploration, Reflection & Scientific Explanation* (DIVERSE). The proposal is led by **City, University of London** and **The University of Warwick** and will be submitted in Sept. 2023.

What is Data Visualization?

Data visualization is a process in which data are depicted in visual, physical and sometimes aural forms that help us detect patterns and structure, understand phenomena and processes and identify opportunities to use data effectively.

DIVERSE-CDT will explore data, needs and possibilities for visualization in all sorts of application areas and design, develop and test innovative visualizations that help people see into data, to determine, extend and achieve their data objectives. 'Data Vis' will enable your organization to do more with your data as you explore and explain it in research informed ways.

Our AMBITION is to:

- ★ design new methods of visually interacting, reasoning and decision-making with data;
- ★ improve understanding and use of visualization in diverse contexts;
- ★ address the diversity problem in technology research by recruiting students from underrepresented backgrounds and areas, and developing ways of working that attract and nurture diverse talent;
- ★ draw upon industry partner experience, research, and prior successes to increase impact;
- ★ develop new interactive ways of conducting, reporting upon and sharing research;

and ultimately,

- ★ change the way data are used in organizations, science and wider society to problem-solve and communicate;

Our developing PROPOSAL is to:

- ★ train 60 PhD students in diverse visual data science, design, and research methods over a period of 8 years in 5 cohorts. This will be complemented with a rich educational programme in creativity, social responsibility, research ethics, scientific communication and entrepreneurship;
- ★ call upon an interdisciplinary team of experienced academics at the Universities of Warwick and London to co-design and deliver training and provide academic focus and supervision;
- ★ use internships in partner organisations to get students working in diverse contexts, with real data, in real teams on real world problems. These collaborations will be key in transferring, testing and developing data vis knowledge;
- ★ develop modes and methods of study, recruitment, engagement and outreach strategies, role models and partnerships, that offer attractive pathways into research for a diverse body of students;

THE INVITATION WHY GET INVOLVED? WHAT'S IN IT FOR ME? HOW CAN I PARTICIPATE?

We want, and indeed need, the PhD students to work in creative and innovative ways on real-world problems, to learn from these and use their research skills and knowledge to explore real-world opportunities and deliver real-world solutions.

That's where partners come in. Collaborating with the DIVERSE-CDT bid involves multiple opportunities and benefits:

- ★ engagement with academic experts;
- ★ participating in hackathons and data challenges;
- ★ sharing data, software or equipment
- ★ attending and hosting open days
- ★ attending or giving seminars
- ★ defining the problems on which students work;
- ★ applying the latest research to your data science;
- ★ offering mentoring or training;
- ★ gaining knowledge and capacity through internships;
- ★ co-funding studentships and advising students;

Funding DIVERSE-CDT

We will apply to the EPSRC for **£8M** of funding.

We have secured more than **£1M** investment from the two universities to support the CDT.

We seek a further £1M in investment in total from diverse partners with whom we can work to define data-driven research projects that involve two-way knowledge transfer and are informed by real-world data challenges and cutting edge research.