Data Fellowship Project 2023

FDM Group – Diversity, Equity, and Inclusion Data Analyst

Organisation and Team

FDM Group – Diversity, Equity and Inclusion

Selection Method

Written application and Subsequent Interview

Application Criteria

Essential:

- Satisfy the requirements set by UoM to join the Q-Step programme
- Passionate about the project described in this document
- Able to express that passion
- Non-STEM training/education e.g. (but not limited to) Social Sciences, Linguistics, Politics, Humanities, Human Rights etc.

Desirable:

- Some experience in data analysis (academic is fine)
- Some coding or SQL or Excel experience (ditto)
- Some knowledge of statistical methods (ditto).

Project Outline

FDM is conducting research in collaboration with Durham University into the way in which people from different groups in society "speak" about careers in technology and using technology. To facilitate this research is a unique dataset of 10M words which has been collected from the applicants to the FDM graduate programme over the past 18 months. In that dataset, the diversity markers of the contributors have been collected along with their answers on how they think about careers in technology and using technology.

The corpus is being cleaned and anonymised and the dataset enriched with derived gender and derived ethnicity and this work will be completed by the time the DEI Data Analysts join the project and the team.

The DEI Data Analysts will then be 'let loose' on the dataset to see what patterns they can find in the corpus. Although the FDM team will be available to provide any advice and guidance the DEI Data Analysts may need, we are nonetheless being deliberately non-prescriptive about how this data analysis will be done. This "hands off" approach should allow the DEI Data Analysts to use their imagination and creativity plus any specific education, training and interests they may have to approach the project.

The DEI Data Analysts will be encouraged to approach and analyse the corpus using an assortment of artificial intelligence and machine learning (AI/ML) methods and engines with the intention of revealing patterns in how different groups are 'speaking' about using technology and careers in technology. Examples of these tools which then DEI Data Analysts might choose could be LIWC, Chat GPT, GPT4, BERT and others. If the analysts have experience in other tools then they would be encouraged to use these as well, if the analysts believe this could reveal some interesting results.

Because of the nature of the project, FDM is particularly interested in applications from candidates with a non-STEM (e.g. Politics, Social Sciences, Human Rights, Linguistic Analysis etc.) background who can bring their own different perspective to the project.

At the end of the project the DEI Data Analysts will be asked to present their findings and any recommendations to the FDM management and University of Manchester Q-Step staff. As this is a research project in data analysis, it is important to note that discovering no patterns in the data would be a scientifically significant outcome - so there is no assumption of 'no patterns = no success'.

It is intended that FDM would try to provide a final year project, based around the same dataset and research, for the DEI Data Analysts to complete at university after the end of this 8 week project, assuming this is of interest to them at the time.

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Practical Considerations

In order to open this opportunity up to the largest pool of applicants, the majority of the work on the project can be done remotely. However, it is expected that the DEI Data Analysts will make at least three trips to an FDM office during the project. A list of our offices can be found on our website (www.FDMgroup.com). FDM will cover reasonable expenses for these visits.

If the successful candidates are local to one of our centres and are interested in working in the office for more than the three visits, then this will also be possible and welcomed.

DEI Data Analysts may use their own IT equipment if they prefer but FDM will provide all equipment and licences required to complete the project including O365, laptop/desktop, licences for ML/AI engines, development licences (R, Pycharm, SQLServer etc.)

Supporting Information

FDM is aware that the University of Manchester has already defined specific criteria for the inclusion of students on the Q-Step programme and, therefore, the focus of the written application should be on why the applicant cares about this topic and this research.

We are not looking for polished CVs and lists of technology and experience - we are looking for people for whom this topic is important and who would therefore be able to contribute to the project.

If you are reading this and thinking "I am really passionate about that topic, but I am sure I am not the best technical candidate and don't have the best grades and CV....." then we would encourage you to apply, please.

Support and Training

FDM's Group CIO (a Manchester University graduate) is the sponsor of the DEI Data Analysts, the originator of the research to which this project relates and will be personally available to support and supervise their work. This should ensure that the DEI Data Analysts receive all of the support that they need.

The DEI Data Analysts will be given access to the training facilities which all IT staff at FDM have access to (as their jobs require), including:

 - LinkedIn Learning

 - Intuition Know How

 - Assorted (initial) training available in our academy e.g. SQL, IT Security, presentation skills.

FDM will provide all hardware and software and licences required to deliver the project.

Members of the Data, AI and Innovation team will be (virtually) surrounded by interested and skilled IT professionals who will be there to help and advise. Members of this team are also completing (or have recently completed) academic studies alongside their working life and the atmosphere is highly supportive of education. For example:

 - Three members of staff are studying for PhDs related to this project, Bias in AI and in Cyber Security.

 - Half of the IT department are studying for BSc in Digital Skills as part of the government's apprenticeship programme (~35 of whom are 1-3 years after 'A' levels).

 - Six more senior members of staff have completed or are in the middle of their MSc in Digital Skills (four focussing on Data Science) and this includes the team leader of the Data, AI and Innovation team.