

JOB TITLE: PSYCHOMETRICIAN OR SENIOR PSYCHOMETRICIAN (DEPENDENT ON EXPERIENCE)

REPORTS TO: EXECUTIVE DIRECTOR OF THE PSYCHOMETRICS CENTRE

Background

The Psychometrics Centre is a multidisciplinary research institution in the University of Cambridge Judge Business School, specialising in all forms of psychological assessment. Having led the development and standardisation of many world-famous psychometric tests since its inception in 1987, the Centre is at the forefront of psychometric research worldwide and is engaged in a wide range of both academic and commercial projects.

We are looking for a psychometrician to join our team to work on the design and development of cutting-edge measurement tools for our clients in the business, education, and health sectors. This is an exciting role that provides the hybrid benefits of both an academic research agenda and a portfolio of impactful commercial projects.

The role is administered in JBS Executive Education Ltd. (JBSEEL), a limited company wholly owned by the University of Cambridge. The core activities of JBSEEL are the design and delivery of executive education programmes. Executive Education is growing rapidly and significantly in some of the Business School's most important and meaningful areas of research, including Environment, Social and Governance (ESG), Strategy and Competitiveness and Alternative Finance. These areas also present novel opportunities for psychological research and behavioural measurement in occupational and educational settings.

To find out more, visit the Psychometrics Centre website: www.psychometrics.cam.ac.uk.

The role

The role holder will oversee the development of psychometric tests and delivery of psychometric training, consultancy, and support to Psychometrics Centre clients. They will provide management and leadership in all statistical and technical aspects of psychometric projects, including the creation of suitable test items, data analysis, machine learning and algorithm development and technical report production. They will instantiate items in software, manage data collection and product development processes from end-to-end and provide mentorship to other psychometricians in the team. The role is in Executive Education and the role holder will report to the Executive Director of the Psychometrics Centre. They will work closely with the software engineers and psychometricians on a daily basis to deliver commercial projects, as well as collaborating with Research Associates and the Academic Director on scientific publications arising from the Centre's activities.

Main responsibilities

Psychometric consultancy and research

- Author and design questions to be included in psychometric tests, including personality and ability tests.
- Create tests and software using the Concerto platform and leading other psychometricians in test-related projects.
- Analyse and oversee the analysis of data using Item Response Theory and other Latent Variable Modelling techniques, and the presentation of results by various means including technical manuals, commercial reports and scientific journal articles.
- Calculate reliability, validity and item response functions.
- Write and oversee the production of feedback narrative and reports for personality or ability tests.
- Produce and set internal standards for high-quality, efficient, and well-annotated code in R, Python and other programming languages to perform analyses and predictions on internal or external data of varying structures.
- Keep abreast of the latest machine learning and artificial intelligence techniques and using these techniques to develop predictive algorithms and software for use in online and offline applications.

Sales and client relationship management

- Respond to inbound sales enquiries and proactively generating new business for psychometric services.
- Negotiate terms, timelines and budgets for consultancy engagements; working with clients to define scopes of work for projects involving test development and data analysis.
- Support the Executive Director in the preparation of tenders, quotes, reports and other client-facing engagements.
- Liaise with technical counterparts in client organisations where necessary to exchange data, code and know-how, following industry best practices for analytics research.
- Explore new sources of revenue for psychometric services and contributing to the Psychometrics Centre's strategy in areas of assessment, research and education.
- Build strong relationships and networks with 'internal clients' including colleagues and collaborators in Executive Education, Cambridge Judge Business School (CJBS) and other departments in the University of Cambridge.

Training

- Design and deliver training programmes in psychometric and data science methods for online and face-to-face delivery, and bespoke programmes for clients across the academic, industry and public sector (occasional travel may be required).
- Represent the Psychometrics Centre's expertise and training services externally and leading marketing efforts for the programmes through various channels to maximise return of investment (ROI).

- Correspond with programme delegates and with the Executive Education finance team to effectively manage the delivery of training programmes and ensure a high level of customer service.
- Mentor and train other psychometricians in the Centre in relevant quantitative techniques and programming and supervising their work on projects.

Co-ordination

- Convene item writing teams and co-ordinating their efforts.
- Collect data through commercial and academic partners and negotiating favourable terms or rates where applicable.
- Manage interns or others to keep websites and wikis containing Concerto manuals, notes, exercises and other online materials up to date.
- Manage and maintain psychometric databases and code repositories, updating as and when required, in line with relevant policies on information security.
- Manage test and predictive tool development by subcontractors or collaborators.

The person

The ideal candidate should have the following qualities, skills, and attributes. You are asked to provide a CV and a covering letter demonstrating how your own experience meets these requirements. We have a supportive and experienced team that can offer valuable internal mentorship and training, so we are interested in hearing about areas where you seek to further develop your skills.

- Graduate level skills in psychometrics or relevant social science discipline, with strong quantitative data analysis and computational skills and a relevant first degree.
- Proven track record of work in designing and implementing questions for use in online test development and administration, and proven track record of developing predictive algorithms using machine learning techniques. Ability to maintain and develop project manuals, websites and wikis. Ability to produce psychometric test manuals containing information on reliability, validity, norms and other relevant test properties.
- Ability to use Microsoft Office (Word and Excel), Concerto, the R Programming language, Python and MySQL. Ability to advise others on R programming within a psychometric context. Ability to plan psychometric test development projects to a high standard.
- Ability to explain psychometric concepts, including Item Response Theory and Computerised Adaptive Testing to prospective users.
- Excellent written and spoken communication skills.
- Friendly, professional and approachable disposition.
- Ability to liaise effectively with both internal and external project participants.
- Ability to deal with contacts in person, by telephone, email, social networks and by mail.
- Proficiency in prioritising and organising their own work schedule and to work with minimum supervision. Ability and willingness to learn new aspects of the job as and when they arise. Excellent attention to detail. Competent mathematical skills.

Benefits

This is a full-time position working 40 hours per week, offering a competitive salary. We offer hybrid working and generous leave allowance of 33 days per annum plus bank holidays, along with extensive benefits. The role holder will also be eligible to participate in the Company's staff incentive plan (Annual Employee Bonus Scheme). There will be a six-month probationary period.

The University of Cambridge comprises more than 150 departments, faculties, schools, and other institutions, plus a central administration and 31 independent and autonomous Colleges. It is one of the world's oldest and most successful universities, with an outstanding reputation for academic achievement and research.

With excellent benefits, extensive learning opportunities and a stimulating and attractive environment, the University of Cambridge is a great place to work. Our employees are eligible for a wide range of competitive benefits and services. We give them access to numerous discounts on shopping, health care, financial services, and public transport. We also offer final salary pensions and tax-efficient bicycle and car lease schemes.

We have two nurseries and a holiday play scheme to help support those with childcare responsibilities and we offer various types of family-friendly leave to aid employees' work-life balance. In addition, we operate a number of initiatives to promote career development, health and well-being.

Further details can be found at www.admin.cam.ac.uk/offices/hr/staff/benefits. There is also a range of information about living and working in Cambridge at www.jobs.cam.ac.uk.

Application arrangements

Candidates are asked to submit a full curriculum vitae and a covering letter explaining their interest in the position and how their experience would help them to fulfil the role, to Helen Machin: h.machin@jbs.cam.ac.uk

The closing date for applications is Wednesday 31 August 2022.

Applicants are required to provide details of two referees. These will not be contacted unless the applicant is shortlisted.

Applicants who do not hear from us within six weeks of the above date should assume they have not been shortlisted.

Equality of opportunity at the University

The University of Cambridge is committed to a proactive approach to equality, which supports and encourages all under-represented groups, promotes an inclusive culture and values diversity. Entry into employment with the University is determined by personal merit and by the application of criteria required for the post. No applicant for an appointment or member of staff will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

The University has various diversity networks which help it to progress equality; these include the Women's Staff Network, the Disabled Staff Network, the Black and Minority Ethnic Staff Network and the Lesbian, Gay, Bisexual and Transgender Staff Network.

Information if you have a disability

The University welcomes applications from individuals with disabilities and is committed to ensuring fair treatment throughout the recruitment process. Adjustments will be made, wherever reasonable to do so, to enable applicants to compete to the best of their ability and, if successful, to assist them during their employment.

We encourage applicants to declare their disabilities in order that any special arrangements, particularly for the selection process, can be accommodated. Applicants or employees can declare a disability at any time.

Applicants wishing to discuss any special arrangements connected with their disability can, at any point in the recruitment process, contact a member of Cambridge Judge Business School's HR team who are responsible for recruitment to this position by email on hr@jbs.cam.ac.uk.