POSITION STATEMENT ACADEMIC STAFF

UTS:HUMAN RESOURCES

POSITION: Research Fellow: Data Science

FACULTY: Connected Intelligence Centre, Office of the DVC (Education and Students)

ACADEMIC SUPERVISOR'S NAME: Professor Simon Buckingham Shum

ACADEMIC SUPERVISOR'S POSITION: Director, Connected Intelligence Centre

The Connected Intelligence Centre (CIC) is a new research and teaching centre at UTS. Located in the heart of Sydney at the City campus, it's been created to provide a world-class data science and analytics research lab supporting the learning, research and business needs of the University. CIC collaborates with external organisations, government departments and other universities to deliver its goals and objectives.

We invite applications from highly motivated data scientists wishing to work in a dynamic team, creating tools to provide insight into diverse datasets within the university and beyond. We welcome applicants from diverse backgrounds, although knowledge of educational theory and practice will be highly advantageous. You are a great communicator, bringing expertise in some combination of statistics, data mining, machine learning and visualisation, and a readiness to stretch yourself to new challenges. We are ready to consider academic experience from Masters level to several years' Post-Doctoral research, as well as candidates who have pursued non-academic, more business-focused tracks.

DUTIES OF THE POSITION:

TEACHING AND LEARNING / EDUCATIONAL DEVELOPMENT

- Occasional preparation and delivery of internal and external training courses.
- Advise and support the CIC team, UTS staff and collaborating partners who are developing their data science and analytics capacity.

RESEARCH AND SCHOLARSHIP

- Under the Director's supervision, work closely with CIC and wider UTS staff to design, implement, evaluate and refine visual analytics in different contexts.
- Report, in collaboration with the Director and other colleagues, technical and research findings through blogs, practitioner channels, and academic conferences/journals.
- Working with the Director, define new Masters and PhD projects, interview candidates and co-supervise the students
- Demonstrate the ability to play an increasing lead role in writing research grant proposals for internal and external funding
- Forge effective collaborations with both academic and industry partners
- Reflect on the nature of the emerging role of Educational Data Scientist within universities, and contribute to scholarship on this in national and international contexts.

CONSULTING / EXTERNAL ACTIVITIES

- Consistent with relevant UTS Policies, and agreed workplans, there may be the opportunity to conduct external consulting.
- Participate with relevant industry and professional bodies.

ADMINISTRATION, MANAGEMENT AND LEADERSHIP

- Attendance at Centre meetings
- Consistent with University policies, develop and submit annual workplans that are aligned with the strategic goals of the Centre and University, and participate in annual performance reviews.
- Take leadership development opportunities, and undertake administrative activities, under the Director's or Project Manager's supervision.

KEY SELECTION CRITERIA ACADEMIC STAFF

UTS:HUMAN RESOURCES

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Skills and Attributes

- Exceptional analytical, critical thinking and problem-solving skills
- Excellent personal and interpersonal skills, enabling you to design analytics with strong engagement from diverse stakeholders (e.g. students; educators; technologists)
- Evidence of initiative and self-motivation, leadership, and readiness to take responsibility for initiating and delivering projects: “you get stuff done”
- Exceptional presentation skills in English: you will be engaging diverse audiences, from small internal groups, to external audiences of hundreds
- Exceptional written communication in English: from general briefings to specialist technical reports
- Experience working in a team, with people of diverse skillsets, including end-users; depending on experience, you have played leadership roles on design projects
- Ready to give and receive encouragement and constructive critique
- High personal integrity, professionalism and ethical standards
- Effective time and resource management without close supervision
- Knowledge of equity principles and commitment to their application.

Knowledge

Clarify which areas you consider to be strengths, and provide evidence:

Data:

- In-depth experience working with a range of data types
- 2+ years experience working in a data-intensive environment, including data storage, integration and manipulation from varied sources
- Fluent in the use of data curation tools
- Experience with cloud storage and services

Statistics:

- Robust understanding of statistical methods
- If you consider this a strength, fluent use of statistical analysis tools such as SPSS or R, ideally, integrated by you as part of an automated analytics workflow.

Data mining:

- Awareness of data mining approaches, including machine learning

- If you consider this a strength, demonstrable experience in the non-trivial application of ML approaches, and critical awareness of relative pros and cons.

Visualization:

- Experience with the design of visualisations to communicate the results of analytics.
- If you consider this a strength, expertise programming with visualisation code libraries (e.g. d3.js) and/or fluent use of professional applications (e.g. Tableau) to engage different audiences.

Educational knowledge:

- If you consider this a strength knowledge of how education, learning sciences, research methods, pedadogy and assessment interface with data and analytics. You may have been an educational researcher or practitioner, and you may have applied statistics/data mining/machine learning to educational data.

Advantageous:

- Formal training in Educational Data Science
- Experience with big data architectures, Hadoop etc.
- Expert machine learning knowledge
- Experience in designing an interactive analytics system from conception to deployment, including evaluation with end-users.
- Robust skills using/customising web-based, cross-platform visualisation libraries like d3.js
- Expert use of visualisation applications like Tableau for crafting engaging presentations
- Strong mathematical thinking and application skills
- Fluent in at least one server side language, e.g. Node.js, Ruby, Python, PHP
- User interface design and implementation
- Experience in the visualisation of real-time data
- Experience with GIS (Geographic Information Systems)
- Experience in design, maintenance and consumption of APIs/Web Services
- Experience with open source or other software collaboration tools, e.g. GitHub
- Digital scholarship/social media presence/online reputation, e.g. through a blog, professional network, or OSS community

Qualifications

- Masters or PhD evidencing intensive data science skills, mindset and education.
- Or Bachelors degree combined with business/industry/government analytics expertise.

Experience required

- On an academic track, you may be an exceptional Masters graduate with outstanding project work, great communication skills, joint publications and business experience in analytics. Or you may bring a PhD in, or using, Statistics or Machine Learning. If you have postdoctoral experience you are now able to initiate and complete research projects.
- If on a non-academic track to date, demonstrable equivalent expertise in data science, and readiness to move into a transdisciplinary innovation unit in a university, with academic impacts as specified.

- A strong research track record commensurate with your experience: publications, software, small/medium grants, visible and active within your research communities, and possibly non-academic impact, e.g. engaging business or civic society with your work.