

Educational Data Scientists: A (Less) Scarce Breed?

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1 STUDYING A NEW SPECIES...

At LAK13, a panel was convened entitled [Educational Data Scientists: A Scarce Breed](#) (position statements and video on website). The panel was framed as follows:

The Educational Data Scientist is currently a poorly understood, rarely sighted breed. Reports vary: some are known to be largely nocturnal, solitary creatures, while others have been reported to display highly social behaviour in broad daylight. What are their primary habits? How do they see the world? What ecological niches do they occupy now, and will predicted seismic shifts transform the landscape in their favour? What survival skills do they need when running into other breeds? Will their numbers grow, and how might they evolve? In this panel, the conference will hear and debate not only broad perspectives on the terrain, but will have been exposed to some real-life specimens, and caught glimpses of the future ecosystem.

Five years on, it is well worth asking if we have a better understanding of this (even more) highly valued profession. Can we now discern different 'species' of educational data scientists, as they establish niches for themselves? What patterns of connection and interaction maximise their success? Do they identify as technicians, analysts, or researchers? Is their mission to display, to analyse, to predict, to understand, or to advise? How can they be supported, and how do we raise the next generation?

2 AUDIENCE AND OUTCOMES

This workshop is intended to add value to those who consider themselves educational data scientists, or who aspire to be; for those who manage them, or are wondering if they should be hiring; for institutional leaders considering build their analytic capacity; for students considering career options; and for researchers who recognise their need for more analytical firepower. Some of the desired outcomes for this workshop include:

- **Educational data scientists** will forge new professional connections that should help them support each other.
- **Leaders, managers and academics** will gain a clearer understanding of the kinds of work that educational data scientists are currently doing, and hence the skillsets they may need to recruit, as well as the organisational positioning for such people.
- **Students** will learn what the study and career trajectory as an educational data scientist may look like, this being one of the most obvious paths following a Masters or PhD degree.
- **Greater understanding for all**, of the opportunities, and obstacles, facing educational data scientists.

3 WORKSHOP FORMAT

Provisional plan:

- In advance of ALASI, a blog post will invite ideas for burning topics that the workshop should pick up and discuss in more detail
- Who's in the room? Quick poll on skills, interests, and roles.
- The co-chairs will share how they came into this role, where they sit organisationally, show examples of the analytical work they do, outline different agendas and rhetorics surrounding education data, explain how they work with 'clients', and present the joys and frustrations of the job.
- From the pre-event blog post and kickoff session, co-chairs will identify key themes and issues that small breakout groups can elect to explore, capturing their thoughts in the workshop Google Doc as a record to share and build on after ALASI. This document will include a listing of the kinds of analyses that participants are engaged in, plus links to helpful exemplars and tools.
- A concluding plenary session will hear from the groups, and consider what would be of most value to resource participants going forward.

4 WORKSHOP CHAIRS

Simon Buckingham Shum is Professor of Learning Informatics at UTS, where he directs the Connected Intelligence Centre, a Learning Analytics innovation centre to advance UTS strategy. He chaired the LAK13 panel on educational data scientists, and now manages several in CIC.

Kathryn Bartimote is Head, Quality and Analytics within the Deputy Vice-Chancellor (Education) Portfolio, and an honorary associate in the School of Education and Social Work at the University of Sydney. In her leadership role, she manages a number of data analysts, and works collaboratively with others in business intelligence, research reporting, and university strategy. She began her academic career as a lecturer in applied statistics and experimental design, and continues to use quantitative methods in her research on various educational psychology topics.

Vitomir Kovanovic is a Research Fellow and Data Scientist at the University of South Australia, working in the field of Learning Analytics and Educational Data Science. A computer scientist by training, Vitomir's work is in the domain of applied data science with a strong emphasis on the importance of theoretical underpinning in contemporary educational research. As one of the recently graduated PhD students and a new Educational Data Scientist, Vitomir will share his experience and views on this exciting and truly interdisciplinary field and some ideas how to navigate its complexities and overcome different challenges.

Mike Pracy is a Data Scientist in the UTS Connected Intelligence Centre. His role is to provide analytic support, data analysis and modelling to other UTS business units as well as collaborate with academic staff within the Connected Intelligence Centre. His background is in physics and he has held research positions in astrophysics and cosmology at several Australian Universities, most recently as a post-doctoral fellow at the University of Sydney. His prior research on large astronomical surveys have proven useful when working with complex educational datasets and student survey response data.