



Insights from the Centre for Social Data Analytics – September 2017

CSDA's work is increasingly being used to make a real difference and our research is helping to support smart policy and sound decision-making. **This issue:** two major new local research projects, meet our US Project Manager Emily Kulick, a video summary of our work with Allegheny County.

Research insights

Allegheny Family Screening Tool

Researchers from George Washington University Law School and Rutgers Law School praise the algorithmic transparency of the Allegheny Family Screening Tool in [a forthcoming paper in the Yale Journal of Law and Technology](#). The authors set out to test the limits of transparency around governmental deployment of big data analytics, focusing on local and state government use of predictive algorithms, studying six algorithms used in 23 states. Only Allegheny County was able to furnish the “actual predictive algorithm (the Allegheny Family Screening Tool) and substantial detail about how it was developed.” The authors conclude “although this project is not fully an open source project, it comes closer than any of the other five algorithms we studied.” One of the researchers, Ellen Goodman was also [interviewed by Wired](#).

Child Welfare PRM Prototype (Douglas County, US)

The CSDA team has successfully built a prototype predictive risk model that Douglas County, Colorado, could use to help improve child maltreatment decision making. “Even without fully integrated data, we have found we could build a strongly predictive model applicable to a small county like Douglas County,” says CSDA's Rhema Vaithianathan. The prototype was presented to county and state leadership in Denver, CO in early September and may lead to a substantial build and implementation project similar to Allegheny County.

Junior Doctors' Wellbeing Survey (Wessex, England)

The research team of Peter Hockey (Postgraduate Dean, Health Education England - Wessex), Amanda Goodall (Cass Business School, City, University of London) and Rhema Vaithianathan are preparing to pilot the MyDay survey in Wessex, England. MyDay will anonymously gather data about the experienced wellbeing of 500 junior doctors in Wessex, with the full survey (of up to 2000 junior doctors) due to start in November. The survey aims to provide detailed population-level insights into the experienced wellbeing of the junior doctor workforce, allowing employers to make informed changes designed to maximise workforce wellbeing. To learn more: <https://myday.aut.ac.nz/>

New projects & partners

CSDA has been funded for work on two major new, New Zealand-focused, research projects looking at inequities in health and protective factors for children and families who have ‘beaten the odds’.

- **Protective factors (NZ):** Rhema Vaithianathan has been funded for a new study using anonymised data from the Growing Up in NZ (GUiNZ) longitudinal study - *Protective factors of children and families at highest risk of adverse childhood experiences: An analysis of children and families in the GUiNZ data who 'beat the odds'*.
- **Inequities in health (NZ):** The “Cost of Doing Nothing” research project is investigating inequities in health between the indigenous Maori and non-Maori adult population in New Zealand and estimating the economic costs associated with these differences. CSDA's Rhema Vaithianathan is collaborating with colleagues from the University of Auckland and Auckland University of Technology for this project which

uses Kaupapa Māori research methodology and is funded by Nga Pae o te Maramatanga, New Zealand's Māori Centre of Research Excellence.

CSDA team news

- Bharati Koli has joined us as a software developer on the Junior Doctors' Wellbeing project.
- CSDA co-director [Tim Maloney has been appointed to Statistics NZ Integrated Data Advisory Group](#).
- The [Data Futures Partnership released its draft guidelines for 'Trusted Data Use' in August](#) - CSDA's Rhema Vaithianathan is a member of this independent, government-funded industry body.

[Read our team profiles](#)

Meet US Project Manager Emily Kulick



For CSDA's US project manager Emily Kulick the most exciting aspect of her job is seeing the practical application of predictive risk models in a way that makes a difference in people's lives.

"CSDA and our partner agencies are implementing these tools on the ground, and going through all the problem-solving that's required to do that, to really improve the safety and wellbeing of children and families."

Kulick, who began working for CSDA at the end of last year, is the vital link between the NZ-based research team who develop the predictive risk models and the US agencies who are using the models to improve decision-making in their organisations.

In the early stages of a project, Kulick's role is to work with partner agencies to understand their current business processes and what administrative data they have available, and then to start to determine where and how a predictive risk modelling (PRM) tool can benefit them.

"There is tremendous potential for data analytics to improve outcomes and efficiency in government."

[Read the full article on CSDA's US Project Manager, Emily Kulick](#)

Spreading the word about data analytics

Our team believes increasing awareness and understanding of data analytics is extremely important. Here are some recent links from our experts:

- ["Five Lessons for Implementing Predictive Analytics in Child Welfare"](#) – *The Chronicle of Social Change* published a blog from Rhema outlining lessons learnt so far in the United States.
- ["The algorithm ace"](#) - *Radio New Zealand*. Rhema Vaithianathan spoke to RNZ's Kim Hill about predictive analytics, about CSDA's current US projects and about the reservations that exist about the application of predictive risk modelling as a tool.
- ["Building the Allegheny Family Screening Tool"](#) - *AUTUNI - YouTube*. A video overview of the Allegheny Family Screening Tool, its implementation and how it is being used to support better decision-making.

- [“New Zealand innovation report”](#) - *Idealog Magazine*. Centre for Social Data Analytics was named by Garage Technology Venture’s MD Bill Reichert as one the NZ companies that most impressed him as he travelled NZ in search of innovators.

Recent publications from the CSDA team

- An article co-authored by CSDA’s Tim Maloney was published in *The International Journal of Higher Education*, [exploring the use of individual-level administrative data to examine potential explanations for the relatively poorer academic performance of Maori, Pasifika and Asian students relative to their European counterparts](#).
- The latest *Children and Youth Services Review* features an article, co-authored by CSDA’s Rhema Vaithianathan, which [explores Predictive Risk Models \(PRM\) as an alternative to existing methods of screening children who may have suffered from maltreatment](#).

Events and outreach

To help advance the understanding and effectiveness of social data analytics, our researchers continue to share their knowledge with local and international colleagues and agencies.

- In June CSDA co-director [Rhema Vaithianathan spoke at Refactor](#), a regular event that aims to improve the New Zealand tech sector by inspiring women to stay involved and ‘get to the top’ of the industry.
- CSDA co-directors Tim Maloney and Vaithianathan will present an in depth briefing on [Predictive Risk Modelling for Child Welfare at the MetroLab Network Annual Summit in Atlanta, Georgia](#), with timing currently being rescheduled due to Hurricane Irma.
- Rhema spoke on a panel discussion on Predictive Analytics for Child Abuse and Neglect at the London Data for Policy Conference this month and, in Hong Kong, will take part in a closed session panel discussion on Government Information Sharing at the International Conference of Data Protection and Privacy Commissioners.

We have sent you CSDA eNews because you have previously shown interest in our work. If you would prefer not to receive this newsletter, please let us know.

W csda.aut.ac.nz **E** csda@aut.ac.nz **Twitter** @AUTCSDA