



## Insights from the Centre for Social Data Analytics – May 2019

CSDA's research and analytics tools are used by local and international agencies to support smart policy and sound decision-making in areas including health and social welfare. **This issue:** independent evaluation of the Allegheny Family Screening Tool, research on adverse childhood experiences in New Zealand, Douglas County child welfare decision support tool live and Chile proof of concept decision support tool delivered.

### CSDA Team News

#### News and Appointments:

From the end of April 2019 CSDA will be co-hosted by the School of Social Sciences and Public Policy and the School of Economics at AUT. While this won't change the way we work, it will renew our focus on the value that social science can add to data analytics research and its growing importance in public policy. Hopefully, this additional affiliation will lead to some stimulating collaborations with our new colleagues.

CSDA has also begun working closely with the [Institute for Social Science Research](#) (ISSR) at the University of Queensland, with Rhema taking a partial appointment at ISSR as a Professor of Social Data and Analytics. We are all looking forward to helping ISSR to build its capacity in the use of predictive analytics for social impact, with a focus on Australian use cases.

In March we farewelled Sandeep Perera who has taken on a logistics role in Napier – all the best Sandeep! We have also welcomed five new members to the CSDA team: Chamari I. Kithulgoda as a Research Fellow (Data Scientist), Megh Mayur as a Data Scientist, Athena Ning as a Software Engineer, and Summer Staninski and Haley Dinh as part time research assistants.

[Find out more about CSDA team.](#)

## Meet Katerina Taskova

### Meet the Team: CSDA Research Fellow Katerina Taškova

CSDA research fellow and data scientist Katerina Taskova is most interested in doing research that directly affects reality.

At CSDA Katerina has been taking a lead role on child welfare data research projects based in Allegheny County (PA, United States) and Chile.

Working with data about real lives, as opposed to the data about cells and molecules that dominated her work at the Computational Biology and Data Mining Group at the Johannes Gutenberg University, has been a bigger adjustment than Katerina expected.

Site visits, family case studies and in-depth engagement with agency staff have all helped to drive home the fact that the thousands of lines of data in front of her represent the lives and unique stories of human beings.



*Katerina Taškova, Research Fellow at CSDA.*

[Find out more about the CSDA team.](#)

## Research Insights

### Independent Evaluation of Allegheny Family Screening Tool

An [evaluation of the Allegheny Family Screening Tool \(AFST\)](#), a CSDA-led predictive risk modelling tool designed to improve the accuracy of child maltreatment hotline call screening decisions, has been completed by Stanford University (principal investigator: Jeremy Goldhaber-Fiebert).

Key among its findings, the report concludes that implementing the AFST and accompanying policy changes improved the accuracy of maltreatment referral screening decisions (i.e., which referrals to ‘screen-in’ for investigation) and reduced racial disparities in case openings between black and white children.

### Rebuild of Allegheny Family Screening Tool

In November 2018, an updated version of the AFST (AFST Version 2) was released with significant enhancements to the original tool and accompanying changes to policy and practice.

[Read updated AFST Methodology and FAQs](#)

### Adverse Childhood Experiences: Prevalence, Protective Factors & School Readiness

With funding from the New Zealand Government, CSDA researchers investigated the effect of adverse childhood experiences (ACEs) on readiness for school, and looked for protective factors against ACEs, using data from the Growing Up in New Zealand longitudinal study. Key findings published in April 2019 include:

- The quality of the mother-partner relationship and parental health and wellness were identified as protective factors; and
- Children’s performance in school readiness tests declined in direct correlation with the number of adversities they had experienced.

Thanks to a further NZ Government grant, [CSDA is extending this research](#). The new study “Mutable factors mediating the impact of adverse childhood experiences (ACEs) on children’s readiness for school” will investigate how services can help improve school readiness for all New Zealand children and those who have experienced adversities.

### **How do spaces affect wellbeing at work? NZ pilot study**

CSDA is collaborating with New Zealand architectural firm Warren and Mahoney, to explore whether it is possible to learn how emotion and wellbeing are affected by the spaces people work in. The study utilises an enhanced version of CSDA's "MyDay" workplace wellbeing survey tool. Researchers are measuring the daily experience of Warren and Mahoney staff in relation to the tasks they are doing and the spaces they are working in. Once data is collected and analysed, researchers will share visualisations of space usage and average emotional affect in spaces, and average emotional affect by task (at aggregate levels).

### **Douglas County Child Welfare decision support tool goes live**

The Douglas County Decision Aide (CO, United States), a predictive analytics tool that supports call screener decision-making on child welfare allegations, went live in February 2019. The impact of the tool will be evaluated via an independent randomised controlled trial running until February 2020. Watch the CSDA website for links to the methodology report and FAQs.

### **Proof of concept for Chile "Childhood Alert" delivered**

In 2018, the President of Chile announced that the newly elected government intended to implement a Childhood Alert Tool to help identify, and provide services to, children at heightened risk of adverse outcomes. In late 2018, Chile's Ministry of Social Development commissioned a consortium of researchers from CSDA and Adolfo Ibáñez University, Chile, to build prototype algorithms for the tool, and provide advice on technical aspects for implementation as well as broader ethical and policy considerations. With final reports delivered, we look forward to the Ministry's response and decisions on next steps for this project.

## **Recent Publications**

Walsh, M. C., Maloney, T., Vaithianathan, R., & Joyce, S. (2019). **Adverse childhood experiences and school readiness outcomes Results from the Growing up in New Zealand study**, Wellington: Ministry of Social Development.

Walsh, M. C., Maloney, T., Vaithianathan, R., & Joyce, S. (2019). **Protective factors of children and families at highest risk of adverse childhood experiences: An analysis of children and families in the Growing up in New Zealand data who "beat the odds"** Wellington: Ministry of Social Development.

Walsh, M. C., Joyce, S., Maloney, T., & Vaithianathan, R. (2019). **Adverse childhood experiences and school readiness outcomes: results from the Growing Up in New Zealand study.** *The New Zealand medical journal*, 132(1493), 15-24.

Brown, A., Chouldechova, A., Putnam-Hornstein, E., Tobin, A., & Vaithianathan, R. (2019, April). Toward Algorithmic Accountability in Public Services: **A Qualitative Study of Affected Community Perspectives on Algorithmic Decision-making in Child Welfare Services.** In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (p. 41). ACM.

## Spreading the word on data analytics

*Our team is committed to increasing awareness and understanding of data analytics. Here are some recent links featuring our experts and their work:*

[Can a computer model accurately identify kids at risk of abuse?, Radio NZ, May 2019](#)

[Child abuse screening tool improves accuracy: researchers, Radio NZ, May 2019](#)

[Can an algorithm help keep kids safe? So far, Allegheny County's screening tool is improving accuracy, Pittsburgh Post-Gazette, May 2019](#)

[Home truths: what hurts and helps Kiwi kids' development, NZ Herald, April 2019](#)

[Early trauma at home can hurt a child's readiness for school - study , Stuff, April 2019](#)

## Events and outreach

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

### November

In November, Rhema Vaithianathan presented a Child Welfare Workshop at the **Alan Turing Institute**, the UK's national institute for the data sciences.

Rhema also presented on the use of predictive risk modelling for child welfare at the **Oxford Internet Institute** (England) and met with representatives of UK city councils.

CSDA co-director Tim Maloney spoke on the **current and future use of data in Government** at an Auckland seminar hosted by the Auckland IPANZ New Professionals network.

CSDA data scientist Diana Benavides-Prado presented at the 10<sup>th</sup> annual **Citizen Security Week in Santiago de Chile**.

### December

CSDA co-hosted a free public lecture by algorithm ethics expert **Lorena Jaume-Palasi**: "Decision-Making: Human vs Machine" and two events focused on **NZ Algorithms in the Public Sector** - an invitation-only roundtable in Auckland followed by a day-long conference in Wellington.

### January

Research fellow Diana Benavides-Prado presented at the **Association for the Advancement of Artificial Intelligence (AAAI)** Conference in Hawaii.

### February

Rhema visited the **University of Chicago Crime Lab** (Illinois, United States) with colleagues from the Allegheny Department of Human Services.

### March

Rhema, Katerina Taškova, and Emily Kulick presented a seminar about implementing predictive risk models in government agencies, at the **Adolfo Ibáñez University, Chile**.

### April

Rhema gave a keynote lecture at the 3rd **IZA Workshop on Gender and Family Economics** in Chile.

CSDA co-director Tim Maloney gave an invited seminar 'Using Data to Inform Call Screening in Child Welfare' at **MDRC**, New York City, the **Wagner School, New York University**, and the **Texas Policy Lab, Rice University, Houston Texas**.

### May

CSDA collaborators presented our (highly commended) co-authored paper "Toward Algorithmic Accountability in Public Services: A Qualitative Study of Affected Community Perspectives on Algorithmic Decision-Making in Child Welfare Services" at the **ACM CHI Conference on Human Factors in Computing Systems (CHI 2019)** in Glasgow.

### Coming Up

#### June

Rhema and Emily Putnam-Hornstein (Children's Data Network, University of Southern California) will lead a plenary Session "Prediction as Prevention" and a workshop at the **National Children's Alliance Leadership Conference** in Washington DC on 4 June.

On 5 June Rhema will present at an AEI event in Washington DC: Big data, little kids: How technology is changing child welfare. <http://www.aei.org/events/big-data-little-kids-how-technology-is-changing-child-welfare/>

On 6 June Rhema will co-present a plenary panel - "Predictive Analytics in Child Protective Services" at **One Child, Many Hands: A Multidisciplinary Conference on Child Welfare** hosted by the Field Center for Children's Policy, Practice & Research at the University of Pennsylvania.

On 7 June Rhema will present predictive risk modelling research to the "**End Violence Against Children**" **Partnership** and its partners, in New York City.

*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.*

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