>> Welcome to the podcast series of Raising the Bar Sydney. Raising the Bar in 2019, saw 21 University of Sydney academics take their research out of the lecture theatre and into bars across Sydney, all on one night. In this podcast, you'll hear Jathan Sadowski's talk who wins in a data-driven world. Enjoy the talk.

[Applause]

>> Great. Thank you all for coming tonight on this great Wednesday evening. I'm very happy to come – to be here, speaking with you all about what, I think, is a really important aspect of society and an important development that's still very much ongoing. The title of the talk is, "Who wins in a data-driven world?" and hopefully, by the end of the talk, we may have an answer to that question. But I think we will definitely, at the very least, understand that question much better. So, society is getting smarter, right, more data-driven, more internet-connected, more automated. Smart technology is everywhere, smart umbrellas that light up when rain is in the forecast, smart cars that relieve drivers of the drudgery of driving, and smart toothbrushes that send your dental hygiene details to the cloud. Nothing is safe from smartification, but there's a strangely conspiratorial truth of the surveillance society we now inhabit that there are unknown entities gathering our personal data for unknown purposes. Companies and governments dip into the data streams of our lives in increasingly innovative and invasive ways, harvesting information on what we do, who we know, and where we go. The methods and purposes of data extraction keep expanding with seemingly no end or limit in sight. And perhaps the most publicised and potentially most powerful example is the rise of social credit scoring systems in China, which could record and govern the lives of billions of people. Importantly, though, this type of scoring system is not new, but rather an amplified version of the type of credit scoring that has been developed and used in places like Australia and the United States for a very long time. So, credit scores are used to make decisions about our access to jobs, homes, bank loans, and more. The Chinese system just takes that logic and expands it to include even more. And as a way of further understanding how this brave new data-driven world operates and its impact for societies, I want to open with a picture of a possible near future in which social credit scoring is integrated into the fabric of smart urban life. And I explore both the non-human and the human components of this data-driven system in the only way that I thought was best, through spoken word poetry. So, this poem is titled "I am the Urban Score Machine". The power will set the stage for us to consider further the past, present, and future of these technologies and their social, political, and human implications. In an age where data technology is increasingly being used to monitor, manage, and monetize our lives, we need to ask the question, "Who is it that really wins, and is there a better alternative?" So, without further ado, I am the urban score machine. I am the algorithm. I am a reflection of reality and organiser of society, a processor that's proprietary. I am a social scoring system, mathematical morality applied, each life simplified, datafied. I am the judge, no jury, an all-knowing actuary issuing three digit decrees. I am the authority of reputation proceeding people

in every situation, accounting the virtue of every action. I make minister of privilege, putting people in their proper place, granting rights by quantified grace. I am the arbiter of access opening the world for the trusted, meeting out data-driven justice, and I'm the apex of power and knowledge. My score is bond beyond bias, beyond reproach, beyond recourse. I am an algorithm governing the city, a ubiquitous score in urban society deployed by a technology company, and I am the city. I am the ultimate unified smart urbanism, a city built on collection and control, monitoring every body, managing every soul. I am the core of the city, a hybrid public private entity, the central office of reputation and evaluation, the core. I am the analysis of data doubles past, present, and future compiled, people processed, pleased, profiled. I am the enforcement of exclusion, impeding and allowing inclusion, a spatial, stratifying solution. I am districts parks, stores, and more open only for those with a good score, secured by guards and locked doors. I am the personalised city interface sorting social standing class as a service, assigning exactly what each score deserves. I am the urban score machine, a society of total surveillance and economy of numerical violence, and I'm the glitch. I am the programmer's mistype, the product of a long night, an accident and oversight. I am a machine's miscalculation, a computational creation, an error, a malfunction. I am a problem nobody rectified, hidden deep inside, buried but I did not die. I am now a feature not a bug, ignored to maintain integrity, overlooked in the name of objectivity. I am an inescapable imperfection, a chaotic corruption of reverberating repercussion. I am an echo's vibration of pebbles ripple, a butterfly wing's flap. I am a glitch in the system. I contain multitudes and magnitudes minor and major, one among many, and I'm the citizen. I'm pretty normal, nothing too unusual, recorded, logged, analyse ranked, my whole life captured, data-banked. I'm moving up, improving my brand, every choice is calculated, planned, living all my life rated, yet in command. I am a reliable trustworthy node, work hard, by right, pay what's owed. A consultant helped me crack that code. I am better than your average Joe, the reward of positive data flow. So, why does the screen say score too low? I'm confused. My quest didn't work, but access is a high score perk, must be a weird computer quirk. I'm reporting a mistake that's glaring, [inaudible] and thank you for sharing, but rest assured, the core is on airing. I'm certain [inaudible] I'm certain something is not right. My score totally crashed overnight. It's way worse than the request denied. I'm unable to live at this rate, my house my job, my friends, my fate are all tied to this algorithmic mandate. I'm just hoping this issue will be corrected. Dear citizen, your request has been rejected, and due to complaints, your score has been affected. Thank you.

[Applause]

So, this poem seeks to paint a picture of a near future, but it's not meant to be a crystal ball that shows us a sci-fi version of the smart city, famously cyberpunk pioneer and novelist William Gibson said that the future is already here, it's just not evenly distributed. Everything I described in the poem either already exist or could exist in some way in some place. In other words, the urban score

machine is already here and is continually advancing and expanding. We don't have to look hard to see other examples of how data is used to fuel systems of exclusion and extraction. We only need to look at places taking the kind of surveillance and scoring systems that have largely been developed in the United States and Europe and then run with them, while also refracting them through its own values and goals. And that place is China. The mobile payment app Alipay is used by over 500 million people for daily interactions. Alipay was developed by Ant Financial, an affiliate of e-commerce giant Alibaba, which is, you know, like a fusion of Amazon, eBay, and PayPal, but with even more functions. So, Ant Financial has a potential valuation, as of early 2019, of 150 billion dollars, raising almost as much venture capital in 2018 as all US and European financial tech companies combined. Big tech plus big data equals big profits and big power.

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>> So, Alipay has built its reputation on being convenient and reliable, no hassles, no worries. Its slogan is, quote, "Trust makes it simple". One day, in 2015, users of Alipay saw a new icon on the app's home screen for a service called Zhima credit, also known as Sesame Credit, which takes the idea of trust to a new level. So, Sesame Credit analyses the mountains of data collected about every user of Alipay plus data acquired from partnerships with a long list of other companies and government to assign each person is social credit score. This score is an assessment of your worth, reputation, and status all wrapped up in a three-digit number. If you ever thought to yourself, "I wonder if I can trust this person?" Well, now you don't have to guess, Sesame Credit tells you. The individualised score calculated by Sesame Credit are based on way more than just financial data. Cheating on a college interest exam, neglecting to pay a traffic fine, having friends with low scores, playing video games too often, all of this could impact your credit score. Alibaba keeps its complex algorithm secret, but it has revealed five broad factors that it takes into account, credit histories, personal characteristics, interpersonal relationships, the fulfilment of contractual obligations, and behaviours and preferences. The perks of having a high score also go beyond low interest rates at the bank. They include skipping the security line at airports or jumping the waiting list for health care. A low score, on the other hand, means potentially being denied access to good job opportunities and foreign travel visas. For the digital underclass, even renting a bike will require a hefty deposit. So, people work hard to raise their scores by buying the right things, interacting with the right people and doing the right things. There are reputation consultants for hire and private chat rooms where high score people swap tips. It's not so much gaming the system, as it is becoming the type of person the system wants you to be. It's not a bug that people are scrambling to produce what's been called positive data that pleases these black box algorithms, but rather a feature of a system that holds power to rate, reward, and punish us. This kind of disciplinary effect in which people try to behave how they think the assessor wants them to behave is intentionally designed into the operation of gatekeeping scores like Sesame Credit or the ubiquitous FICO credit score in the

United States. So, when the disciplinary power fails, and people step out of line, that's when the power of control comes into play through, for example, the use of blacklist to take away rights and privileges. By 2020, the Chinese government plans to launch its social credit system, and his initiative, when it's rolled out, will be like a mandatory government-run version of Sesame Credit created with the help of Baidu, one of the world's largest technology companies. According to Wired Magazine, quote, "The aim is for every Chinese citizen to be trial or trailed by a file, compiling data from public and private sources by 2020, and for those files to be searchable by fingerprints and other biometric characteristics." In the meantime, the Chinese government is doing more than just watching and learning from the private scoring systems, operated by companies like Ant Financial. It's also sharing much of the data these companies rely on. Alibaba announced that less than 20% of the data used to assess personal credit comes from Alibaba itself. And more than 80% of the data are collected from other sources, particularly, government databases. Now, for those of us in the – in Western countries, it's easy to claim that a social credit scoring system like Sesame Credit is the product of an authoritarian regime or a foreign country. It's tempting to sit back and say, "Wow, I'm glad I live in a free country where nothing like that would ever happen." Even worse, these reports are sometimes used to back up divisive claims about how we are superior to them. But this type of knee-jerk response completely misses the point. The logics and technologies at work in the social credit scores are not just some orientalist dystopia, dreamt up by the big bad Chinese. They are only somewhat amped up versions of what has long existed in Australia and Europe and the United States, places that innovated these systems in the first place. If this is a dystopian dream, then it is a shared and lucid one. You might have read about the social credit scoring system before coming to this talk. However, it's unfortunately common that journalists and even scholars who can have the most critical informed eye about surveillance and control in other places like China, like Russia, where there's this long history of Cold War antagonism, they are, at the same time, also unable to see how the same kinds of systems are already all integral parts of the society that we live in, the lives that we lead now. We in the West have already – we in the West already rate and rank everything, and in return, we are rated and ranked. We are assigned an untold number of scores created in hidden ways by secretive organisations that use them for various purposes, unknown unknowns, known knowns, all of that. So, for example, in an effort to have a points-based immigration system like Australia's, last year, the United States Department of Homeland Security proposed using applicants' credit scores to help decide which immigrants get to live in the US and which are rejected. It's important for us to look to the past, to see how the groundwork for these kinds of technologies for the kind of future depicted in my poem was laid long ago. Before data brokers could correlate countless bits of data and build detailed profiles of individuals, consumer reporting bureaus in the early 1900s and late 1800s would rely on gossip and gumshoe. Investigators would go around to local bars, like this one, asking about you, pull files from public records, clip newspaper articles. They would gather information on everything they could find about you, whether

true or false, fair or unfair, irrelevant or relevant, and then provide it to curious creditors. Your dossier was likely to contain whatever information they could get away with gathering or making up about you. So, if you were considered a sexual deviant, a drunk troublemaker, adulterer, or whatever else, it was all fair game, if a creditor was willing to pay for that information. In the mid-20th century, consumer reporting bureaus turned into credit scoring agencies. Their business model is now based on constructing detailed personalised profiles and analysing data from individual reports to derive metrics of risk and worthiness, like the widely used FICO credit score I mentioned earlier. These agencies include Equifax, which was founded 120 years ago in the US, in 1899, and is now one of the largest data brokers in the world with billions of dollars of revenue every year. The scores these agencies create not only give judgments an air of objectivity, but also allow lenders, employers, and landlords to automate their decision-making. If your score is above a certain threshold, then you get the loan, the job, the apartment, if not, then tough luck. These companies trade on the idea that their algorithms and scores are objective and neutral. Their outputs are framed as accurate reflections of the world, thereby allowing them to escape blame for any harmful unjust outcomes. They might say in response to challenges about their methods of analysis, "Those are just facts. It isn't our fault if you don't like the way the world works." But in reality, these weapons of mass destruction, as computer scientists Cathy O'Neil has called them, smuggle in a host of stereotypes, biases, and errors. They both reflect and reproduce longstanding inequalities. The data harvesters and scoring systems that today are part of this lineage, but with supercharged abilities to amass, analyse, and apply data, we all swim in murky waters in which we're constantly tracked, assessed, and scored, without knowing what information is being collected about us, how it's being weighted or why it matters. Much of it is just as irrelevant and inaccurate as the hearsay, a symbol during the early days of consumer reporting. These old reports might be a thick file of information about a person, but they don't hold a candle to the digital dossiers that are now distributed across different data banks. Similarly, the common credit score is transforming, multiplying, as new versions are created to measure more than just financial risk. Tech companies claim anything can be boiled down to a simple score. Their mission is to track and determine the total worth of every person, and this mission is distilled into the model used by the American startup [inaudible] Finance quote, "All data is credit data." This makes Alipay's motto, trust makes it simple, seen, in comparison, much less ominous. As we can see, China is far from the only adherent to the calculative ideology underlying data technology. Indeed, the data-driven world being built in China should not be seen as a crystal ball vision of our own future. The way these technologies are designed and used necessarily reflect the social and political context of China. And they will look differently in Australia, even if their processes lead to many of the same endpoints. What we should do instead is look at them as examples of how these smart technologies can develop and then consider how they are likely to continue advancing under a deeply stratified, totally surveilled, highly corporatized version of digital capitalism, you know, like the kind that's being

perfected by the companies and governments that currently govern our lives. It's worth quoting at length Shazeda Ahmed, a scholar of internet policy in China, who has written some of the most sobering analysis of the social credit scoring system, quote, "The current state of the social credit system is far less sophisticated than is portrayed in the foreign press. But if the scope of what can count as blacklist data widens, and if the tech sector takes an even more pervasive searchlight approach to seamlessly melding these data into their core offerings, the system could move much closer to the dystopian texture that appears in the media. In particular, if China embraces the marketization of blacklist data, so that data is bought and sold, like in the US, information about individuals would become even harder to track and contest." end quote. So, it's not hard to imagine an international integration of social credit scoring systems. Why should country have its own credit score, when a global system can be more holistic, complete, and powerful? Such a merger could finally actually give us the worst of both worlds, and on that down note, thank you.

[Applause]

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