

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Thursday 2nd February 2017 6:45 for 7:15 PLEASE NOTE EARLIER TIMES

Room 215, Coslett Building, Anglia Ruskin University, East Road, Cambridge CB1 1PT

What can gambling machine data tell us about betting behaviour?

Karthik Tadinada (David Excell's colleague will now deputise for David)
Featurespace

Abstract: Featurespace and NatCen partnered with the Responsible Gambling Trust to investigate harmful patterns of play on gaming machines, and draw implications for intervention.

I'll present the methods and results of this ground-breaking investigation, linking industry-held data from the five largest UK bookmakers with surveys of loyalty card customers (which measured customers' Problem Gambling Severity Index score as a proxy for harmful play), integrating research methods for 10 billion individual gaming machine events. The data set included 6.7 billion bets and 333,000 customers. We harnessed this huge data set to model actual gaming play, measure theoretical markers of harm (e.g. faster gaming), survey loyalty card customers (matching 4,001 responses with transactional data) and explore consumer interventions. We produced two predictive models, exploring the statistical relationships between the data and the customer surveys. The results showed it is possible to distinguish between problem gamblers and non-problem gamblers in industry data:

* **Player model:** behavioural analyses in loyalty card holder data – 66% improvement over the current baseline model.

* **Session model:** proxy measurements for anonymous players rather than individual players – 550% improvement in accuracy of detecting problem gamblers over the industry standard.

The research demonstrated that a combination of variables are needed to identify problem gamblers, in contrast to proposed policy suggestions of regulating individual parameters (e.g. stake size). We'll assess approach limitations, including data skewedness, and explore the challenges of incorporating big data into social scientific investigations.

Speaker: David is Co-founder of Featurespace. He has over seventeen years of experience transferring technology into practical business applications, and under his leadership Featurespace has grown from a concept to a commercial success with many blue-chip customers. David has been awarded more than 11 prizes and scholarships for his academic and commercial achievements, including the 2011 ITC Enterprise Award for Young Entrepreneur.

Directions: The talk will take place in Room 215 of the Coslett Building which is a lecture theatre located on the second floor. It is not possible to park at the campus but free parking is available after 5pm until 9am on Mackenzie and Collier Roads immediately outside of the University gate parking on the single yellow lines to avoid residents' spaces (see attached parking map). The Coslett Building may then be quickly accessed via the Collier Road pedestrian access upto 6pm (see Coslett map). An alternative route (open to midnight): The Coslett building may also be accessed by going through the Helmore Building on East Road. Walk straight ahead and turn right when you reach the library after you have passed the restaurant and follow the corridor round. You will see a glass door on your right. Press the button to open this and walk through and turn left. The building in front of you is Swinhoe House. When you get to Swinhoe House take the path to the left. Turn right going around the side of Swinhoe House. Follow the path around to the left and then walk straight ahead. The Coslett Building is at the end on your left (building number 11 on the Coslett map). Once inside the building go up two floors by lift or stairs and turn right on exiting the lift or stairs. Room 215 is at the end of the corridor. In addition there are nearby free to use (after 5pm) short stay public car parks nearby in Gwydir Street (for upto 2 hours) and at the Beehive Centre (for upto 3 hours).

Provisional Next Meetings:

7th March – Patricia Fara (Clare College) on 'A lab of one's own: science & suffrage in the First World War'.

3rd April – Daniel Gaffney (Sanger). 3rd May – Alun Bedding (Roche Products).

October – Zoubin Ghahramani (Engineering). 20th November – Adam Kashlak (Stats Lab).

Supper: Some members will be meeting for supper in the Helmore Building Restaurant (ARU) at 5-30pm. All welcome !

Subscriptions: of 1 pound are now due for attending the 2016-2017 session.

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Slides and .mp3 files of old talks: <http://www.mrc-cbu.cam.ac.uk/people/peter.watson/csdg.html>