

#DigitalYouth

How children and young people
are targeted with harmful
product marketing online



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Summary

- Gambling, alcohol and unhealthy food companies are marketing online in ways that target children with advertising for their harmful and addictive products.
- Children as young as 8-years old were being bombarded with advertisements (ads) for unhealthy foods – including when they search for scooter tricks on social media and play online games. On average, results suggest that children aged 8 to 13 years old may be targeted with approximately 13 junk foods ads on a typical day they spend online.
- Teenagers aged 14 to 17 years old were estimated to see an average of one instance of gambling marketing, 6 alcohol ads and 24 junk food ads, every day. For one teenager, this was as high as 2 gambling ads, 14 alcohol ads and 70 food ads over a typical 2-hour period they spend online.
- Teenagers were targeted with a similar amount of advertising for harmful and addictive products as young adults, with young adults aged 18 to 25 estimated to see an average of 2 instances of gambling, 7 alcohol ads and 23 junk food ads every day when online.
- Many ads targeted at children and young people were interactive. For example, ads prompted them to 'install' a gambling program, to 'learn more' about alcoholic drinks, and to 'shop or order now' for confectionary and unhealthy takeaway foods – directing children and young people to platforms where they are sold gambling, alcohol and unhealthy food products.
- SCANNER provides a method for automatically monitoring harmful product marketing online, enabling companies to be held accountable for their marketing practices.

Background

Children and young people are being bombarded with online marketing for junk food, alcohol, gambling and vapes. Through digital devices, marketing messages are seamlessly integrated into the digital lives and cultures of young people, through various platforms such as social media, influencer content and advergames. Data-driven marketing techniques capitalise on individual vulnerabilities by targeting and personalising marketing messages in ways that maximise engagement and drive corporate profits. This comes at the expense of our communities' health and wellbeing.

Research shows that children and young people exposed to harmful product marketing leads to increased consumption or use of the marketed products and increases the likelihood that they will consume or use them more in adulthood, particularly at high risk levels. However, monitoring exactly what children and young people see when they are online is challenging, as marketing messages are highly targeted and personalised, and collecting children's data can be ethically sensitive.

Research overview

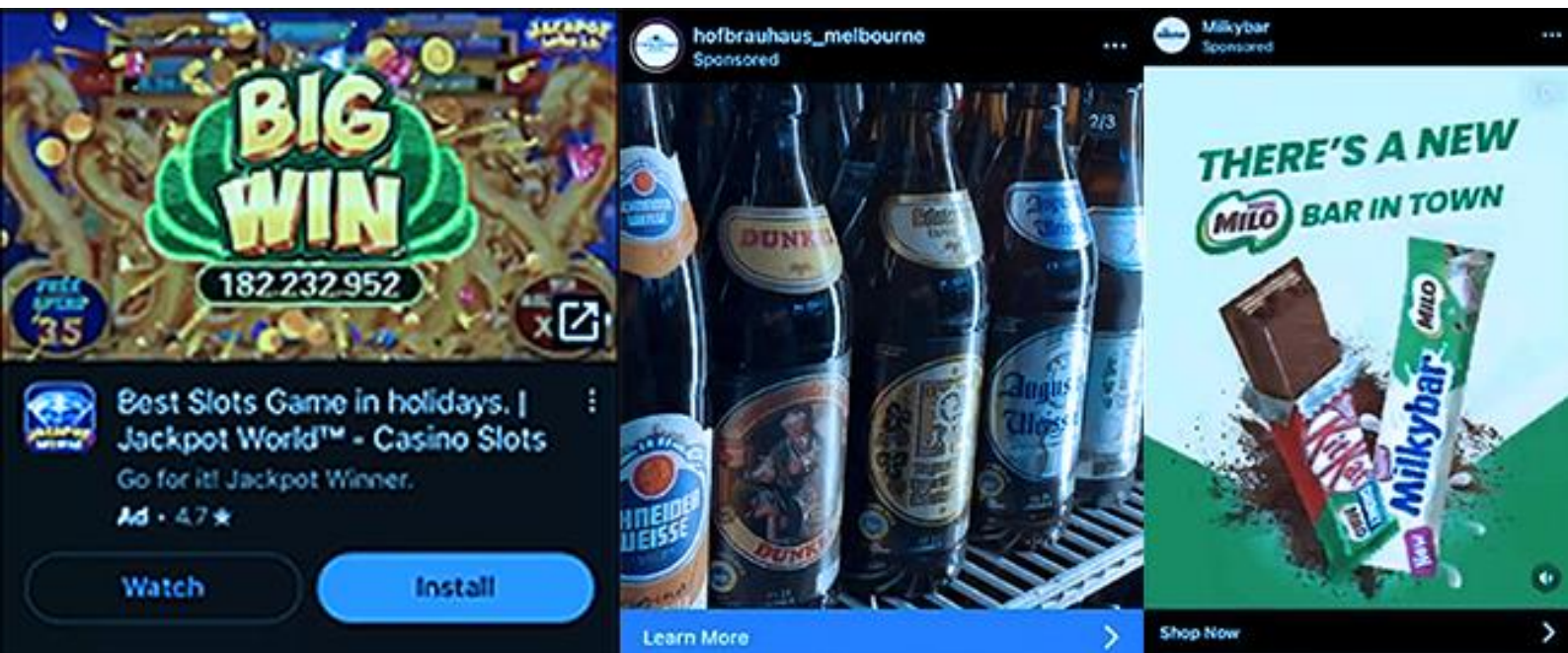
Our team at the Global Centre for Preventive Health and Nutrition (GLOBE) in the Institute for Health Transformation together with the Institute for Intelligent Systems Research and Innovation (IISRI) at Deakin University has developed an artificial intelligence (AI)-based system, SCANNER, to detect and quantify online marketing for harmful products (junk foods, alcohol, tobacco, e-cigarettes, and gambling).

We field-tested our AI system for the first time in Australia by collecting digital screen recordings from 16 children and young people between the ages of 8 to 25 years (comprising 7 children aged 8 to 13 years, 4 teenagers aged 14 to 17 years, and 5 young people aged 18 to 25 years). Participants shared with researchers their screen recordings, which represented 30% of their usual screen time on 2 days while using their digital device outside of work and/or school. We analysed these recordings through both SCANNER and manually (to validate SCANNER). At the time of field-testing, SCANNER was trained to automatically identify 125 leading food brands, 148 leading alcohol brands and 99 leading gambling brands in Australia.

Findings

We found that when children are online, they are being targeted with gambling, alcohol, and unhealthy food advertising. Our findings suggest:

- Children as young as 8-years old are bombarded with junk food ads when online – with approximately 13 junk food ads being targeted at children aged 8 to 13 years every day.
- Teenagers (14 to 17 years) see ads for alcohol and are exposed to marketing for gambling through online sporting events. On average, they are likely to see at least one instance of gambling marketing, 6 alcohol ads and 24 junk food ads, every day while online. For one teenager in our study, this was as high as 2 gambling ads, 14 alcohol ads and 70 foods ads over a 2-hour period that they usually spend online.
- Young people (18 to 25 years) are seeing gambling ads, alcohol ads and junk food ads. On average, they see 2 instances of gambling ads, 7 alcohol ads and 23 junk food ads every day while online.
- Ads included interactive buttons that link children and young people to platforms where gambling, alcohol and unhealthy food products are sold. For example, buttons prompting them to 'install' a gambling app, to 'learn more' about alcoholic products, and to 'shop now' and 'order now' for confectionary and unhealthy takeaway foods.

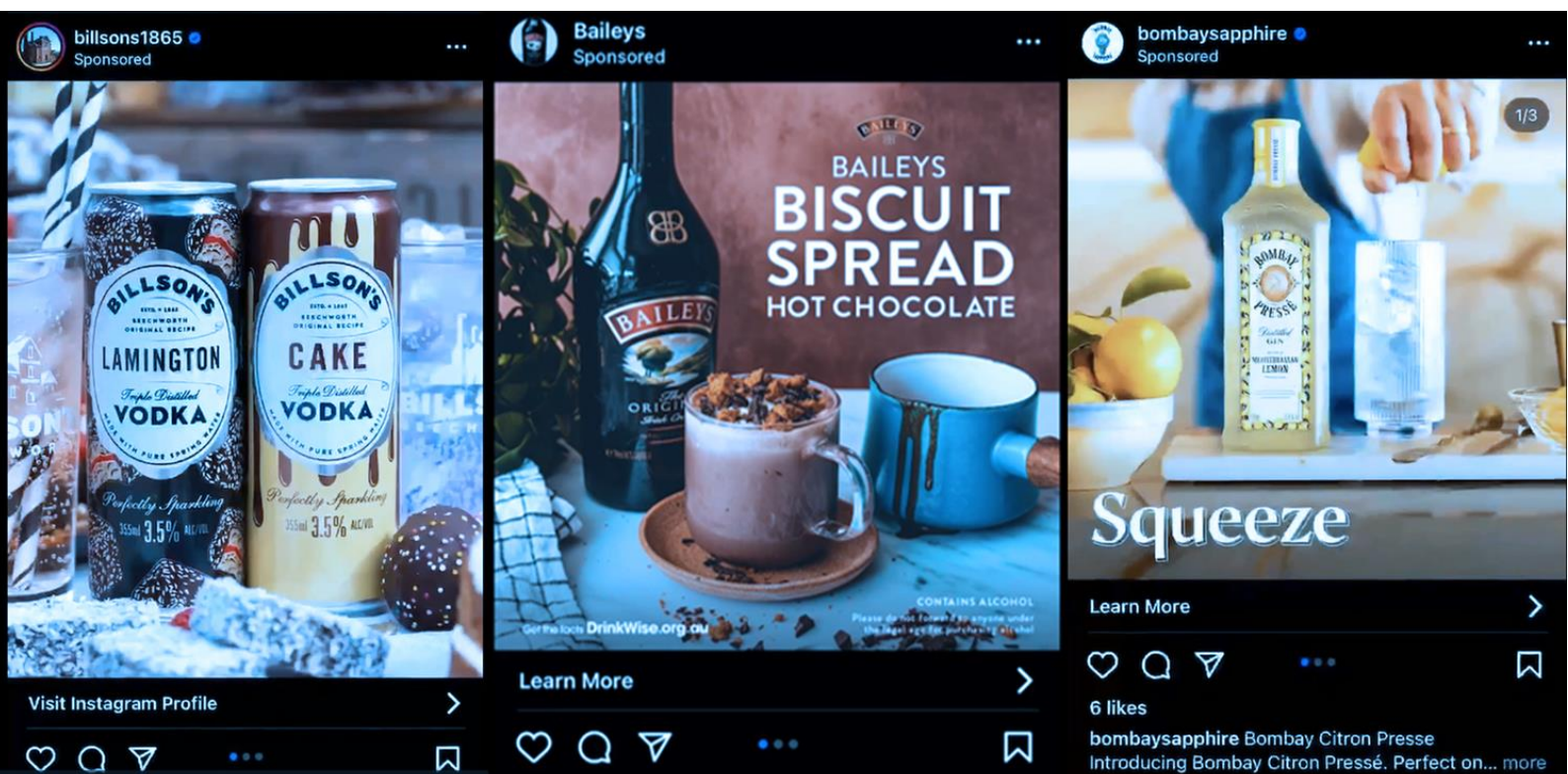


The story of Jack

How 16-year-olds are targeted for alcohol ads when online

Below is the story of 'Jack'. 'Jack' is a persona that represents what we observed for how alcohol marketing was targeted at teenagers online.

- Jack is a 16-year-old boy living in Australia.
- He spends 2 to 4 hours a day online.
- He spends most of his time online browsing social media sites and chatting with friends.
- He usually plays online games for about 3 hours a week.
- He has social media accounts on Instagram, YouTube, Snapchat, and X.
- When he is online, he sees targeted ads promoting alcohol in his Instagram feed (as illustrated below).

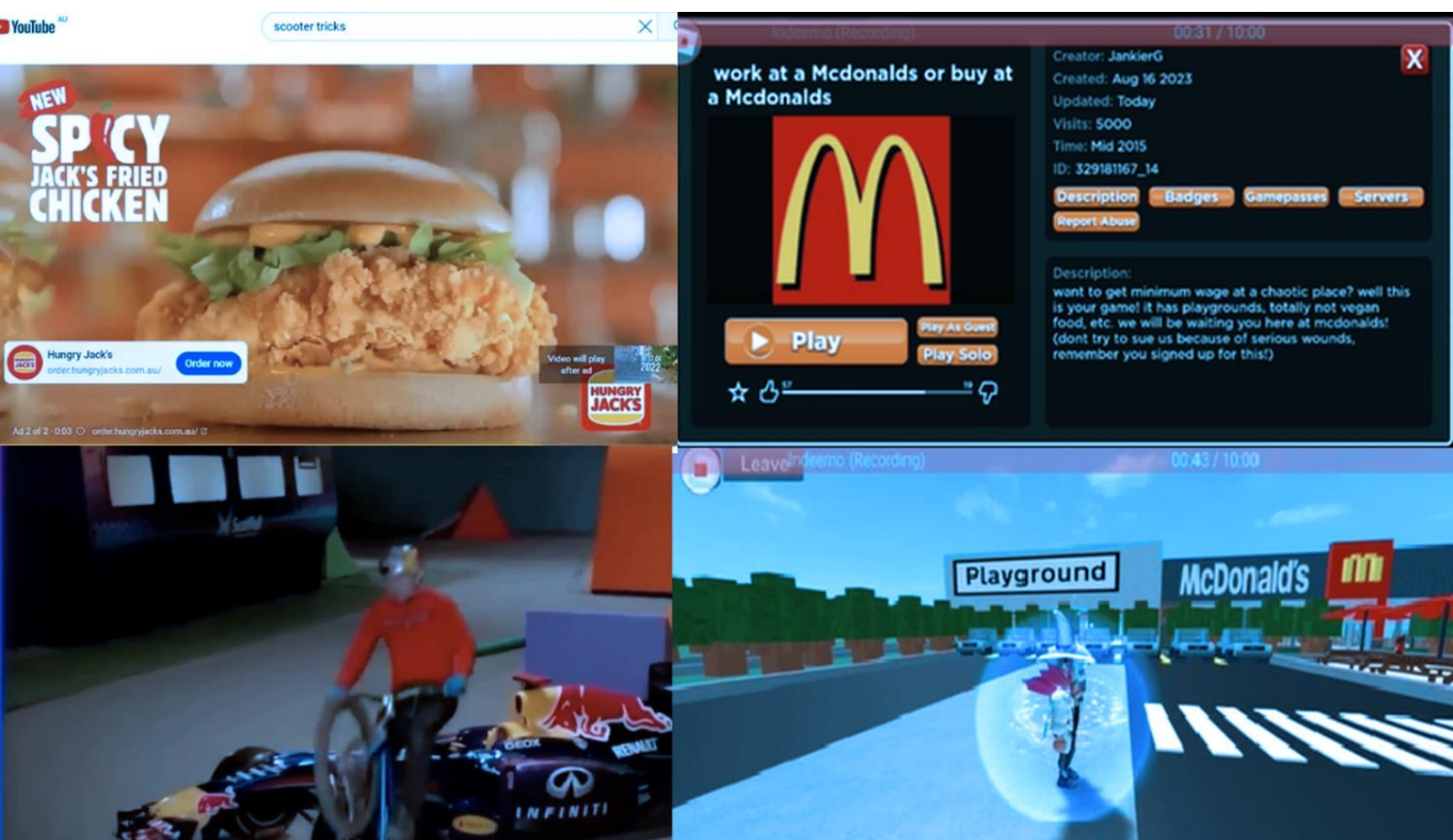


The story of Peter

How 12-year-olds are prompted to eat at McDonald's in the virtual space

Below is the story of 'Peter'. 'Peter' is a persona that represents what we observed for how unhealthy food marketing was targeted at children online.

- Peter is 12-year-old boy living in Australia.
- He spends 1 to 2 hours a day online.
- He spends most of his time online playing games.
- He usually plays online games for about 2 hours a day.
- One of the games he plays is Roblox. A popular setting in the Roblox game is to eat and work at McDonald's. Peter sees 3 minutes of McDonald's branding for every hour he spends playing the Roblox game.
- He also gets targeted with unhealthy food ads from many companies, such as Hungry Jacks, Nutella, and Coca-Cola, including when he is searching for scooter tricks on YouTube.



SCANNER

A tool for monitoring harmful product marketing



- SCANNER is a way that harmful product marketing can be automatically recorded and quantified online, holding industries to account with existing rules and regulations.
- SCANNER achieves an accuracy of more than 95% in detecting the marketing of harmful commodities it is trained to detect (unhealthy foods, alcohol, gambling and vapes).
- SCANNER is at least 12 times faster than manual analysis.
- SCANNER protects the privacy of children and young people by removing the need for humans to see the recordings participants share.



Conclusion

Harmful product marketing remains largely unregulated in Australia. As a result, children and young people are targeted with harmful product marketing when they are online. This is a problem as it encourages the use or consumption of harmful and addictive products, the impacts of which have life-long consequences. This pilot study will be scaled up to obtain more robust data on children and young people's exposure to harmful marketing. SCANNER is a low-resource tool for monitoring harmful product marketing online and can be used to ensure effective regulation of harmful product marketing.

Acknowledgments

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