

How Does Data Science Preserve and Advance a Niche Game During COVID-19

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What to share:

We developed an online card game platform called TractorCloud (<https://tractorcardgame.com/>) that enables “Tractor” card game hobbyists in the DC-Maryland-Virginia (DMV) area to continue their routine pastime entertainment while keeping social-distancing during COVID-19.

TractorCloud was first introduced among the local communities in the DMV area (DC-Maryland-Virginia area) and rapidly gains its popularity in over 14 states including Florida, California, and so on. Using data science, we advance this niche game effectively, creating an engaged and loyal user group, enabling a robust and inclusive system, and bridging people of common interests through a series of successful events. According to user feedback, this platform is “their major source of joy” and it “helps to relieve stress and maintain mental health during COVID-19”.

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Main challenge: how to maintain a long-lasting active local community under COVID-19

“Tractor” is a family of point-based, trick-taking card games that are popular in China and in Chinese immigrant communities in the U.S..

- There are different types of Tractor games, but they are all about partnership and competition.
- In one version, 2 teams of 3 players play 3 decks of cards.

Over years, we have maintained a very engaged and close-connected “Tractor” hobbyists in the DMV area.

- Six annual tournaments were organized since 2013, with over 100 players participated in each event
- “Tractor” community has become one of the most active local affinity groups that enable Chinese Americans to socialize together
- People make friends and build strong bonds with each other - *“It is not just a game. It is a lifestyle.”*

COVID-19 makes it impossible for us to meet and play. The long-lasting tradition of the local community is at risk.

Our solution: crowd-source expertise to create a new online platform - TractorCloud

Data science and analytics are in the gene of the platform

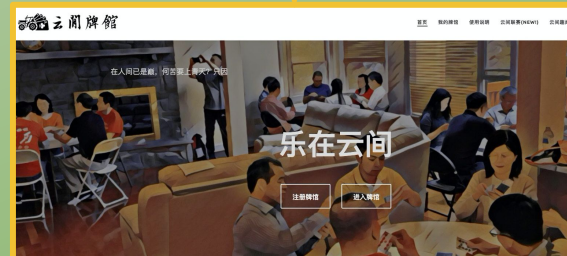
About TractorCloud :

- A cloud-based online platform for “Tractor” game
- Browser-based and easy to access from any PC and tablet
- Released to users in mid-April 2020
- 70,000+ games played so far, workload equivalent to 70 annual tournaments when playing offline



Data science and analytics in daily operation:

- *Interactive data visualization* and *data report* to understand system performance and user activities
- *Near real-time data analyses* to inform users' decision making and reduce new users' learning curve
- *Network analysis* to visualize super-users & clubs activities
- Carefully designed data collection to be mindful of *user privacy and security*



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总牌局数	每局耗时 (分钟)	每场比赛耗时 (小时)	过去7天活跃牌馆
69,765	9.9	2.5	88

Data-driven development and evidence-based design foster a strong community

- **More balanced rule:** call for more competitive gaming, require more teamwork, and bring more fun
- **Smarter decision making:** Primary experimental data proving hypothesis
- **Greater impact and engagement:** from a local event to cross-regional community in the U.S. (44 teams from 14 states participated in a quarter-long online league)

Big & real data to support game rule making (N = 67,307 games)

Timely data to enable smarter decision making (N = 1,864 games)

