In favor of spatial computing contests and prizes

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Abstract

Spatial computing, e.g., as embodied in ACM SIGSPATIAL[1], would benefit from more programming and data analysis contests, aka competitions, aka prize challenges. We should expand the ACM SIGSPATIAL (GIS) Cup[2]. This would increase interest and attract attention to the field.

1 History

Historically, contests have often generated publicity and stimulated advances. In 1919, John Alcock and Arthur Whitten Brown won a Daily Mail prize for the first transatlantic flight[3]. In 1927, Charles Lindberg won the Orteig Prize[4] for the first New York-Paris flight. DARPA ran its 2004 Grand Challenge for autonomous vehicles[5]. In 2009, they had the Red Balloon (Network) Challenge[6]. DARPA has also had several other prize challenges[7]. In 2014, IARPA Issued a $50K Automatic Speech Recognition[8] Software Challenge, and in 2016, a Hybrid Forecasting Competition[9].

Kaggle[10] provides a framework for running data science competitions, of which it has hundreds, including test datasets. Many are designed by for-profit companies, and have real prizes, up to $100,000. Machine Learning has its Challenges[11] and even a conference competition track[12].

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[1] https://www.sigspatial.org/

[2] https://sigspatial2022.sigspatial.org/giscup/index.html

[3] https://en.wikipedia.org/wiki/Transatlantic_flight

[4] https://en.wikipedia.org/wiki/Orteig_Prize

[5] https://www.darpa.mil/about-us/timeline/-grand-challenge-for-autonomous-vehicles

[6] https://www.darpa.mil/about-us/timeline/network-challenge

[7] https://www.darpa.mil/work-with-us/public/prizes

[8] https://executivegov.com/2014/10/iarpa-issues-50k-prize-challenge-for-new-automatic-speech-recognition-software/#sthash.84qMZCt5.dpuf

[9] https://www.iarpa.gov/research-programs/hfc

[10] https://www.kaggle.com/

[11] http://www.chalearn.org/challenges.html

[12] https://neurips.cc/Conferences/2022/CompetitionTrack

2 Advantages

Contests will bring several advantages to our domain.

- A contest that catches the public eye will bring us favorable publicity.

- Funding agencies, ranging from governmental agencies to corporations to private foundations will become more aware of us as a productive place to spend grants and contracts.

- Students will think of our profession when deciding a career.

- If the contest presents a problem that is not well solved, aka a grand challenge, our researchers will be motivated to discover better solution techniques.

3 Proposal

Might we in the SIGSPATIAL community do likewise? However, what such a contest might be is still a quandry. Ideas?

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