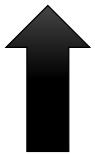
CS/INFO 4154:
Analytics-driven Game Design

Class 26:

Ubiquitous Gaming

Mon	Wed	Fri
	10/25 Ubiquitous Gaming	10/27 Friends Release 1
10/30 Friends Release 2	11/1 Friends Release 3	11/3



Friends Release Report due 10:10am

Friends Release

- Requirements
  - ***Smooth progression*** of nine* tasks
  - Tutorials
  - Music
  - Sound
  - Logging

* Negotiable; “task” definition depends on your game

Friends Release Report

- Instructions on website
- Due **BEFORE CLASS** by 10:10am on Friday 11/3
- Academic Integrity:
  - **It is expected that all players are real players**
    - Exception: accidentally testing your game with logging active
      - OK if it happens a couple of times
  - If there is a recording problem, *please let us know*

Today

- How can analytics help us understand a major shift in video games?

Outline

- Research on *Pokémon GO*
- What makes a location-based game work?
- The impact of “ubiquitous gaming”
- Open office hours

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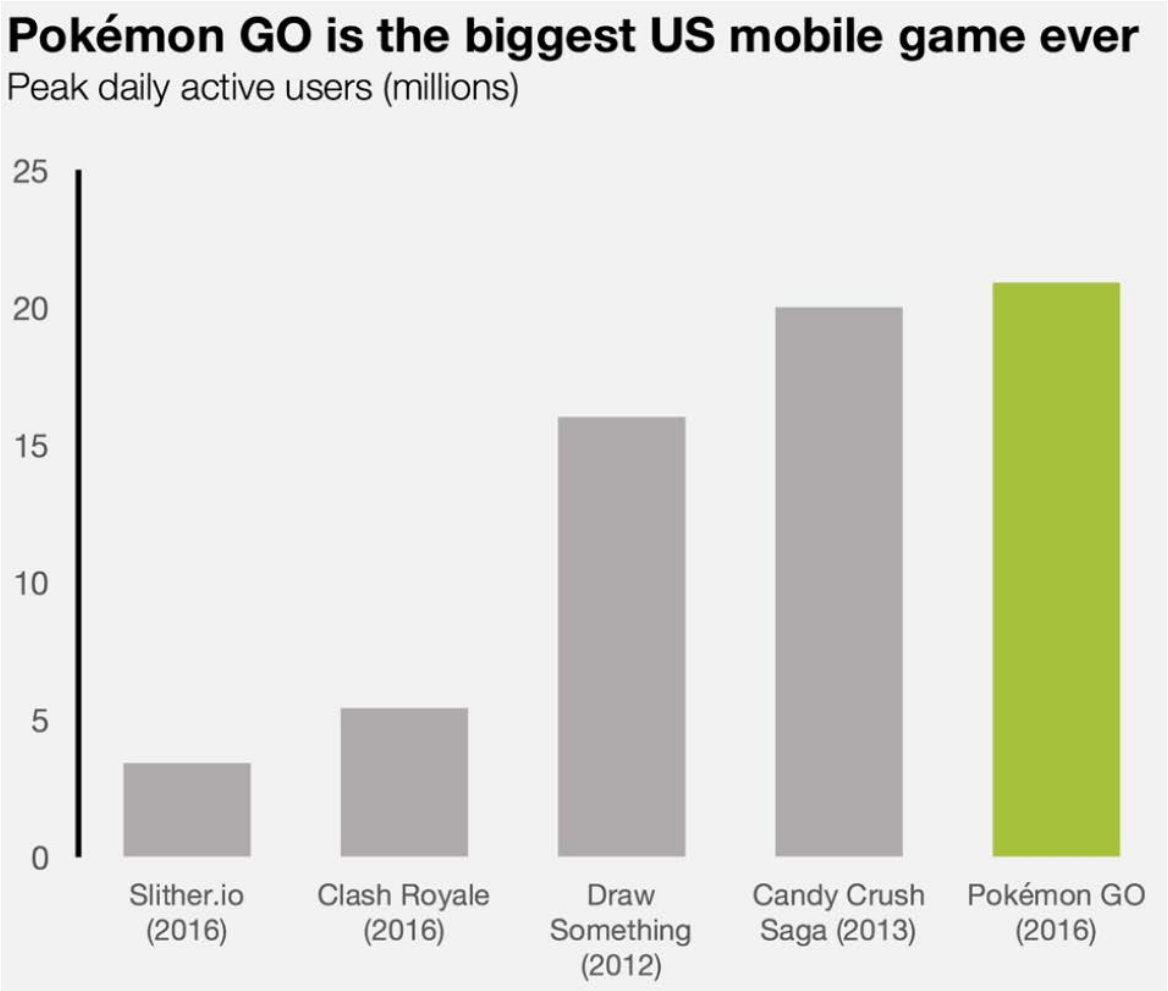
Pokémon GO



Source: TechCrunch

Pokémon GO

Questions:

- How did Pokémon GO affect the *movement* of people?
- How did it affect *payment*?
- What is the impact of *alternate* reality?
- What is the impact of *augmented* reality?

Survey of Pokémon GO players #1

- 1,000 Finnish players
- Recruited through Facebook groups
- Qualitative, open-ended responses analyzed through coding

Paavilainen et al. CHI 2017

Survey of Pokémon GO players #2

- 375 players
- USA, Germany, Portugal, Finland, Belgium
- Qualitative, open-ended responses analyzed through coding

Colley et al. CHI 2017

Questions:

- How did Pokémon GO affect the *movement* of people?
- How did it affect *payment*?
- What is the impact of *alternate* reality?
- What is the impact of *augmented* reality?

% who went to a new place

60%

65 million monthly users in April 2017 (Source: Niantic):

- 60% of this would be **39 million people**

Colley et al. CHI 2017

% who went to a new *city*

9%

65 million monthly users in April 2017 (Source: Niantic):

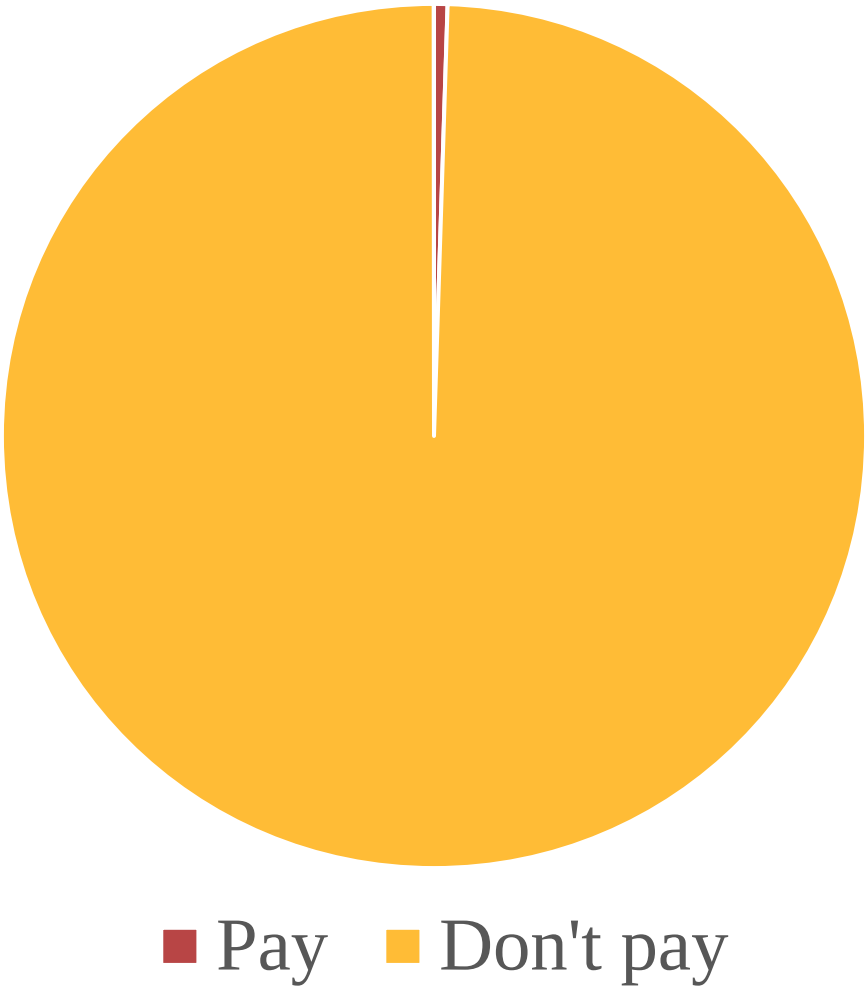
- 9% of this would be **6 million people**

Colley et al. CHI 2017

Questions:

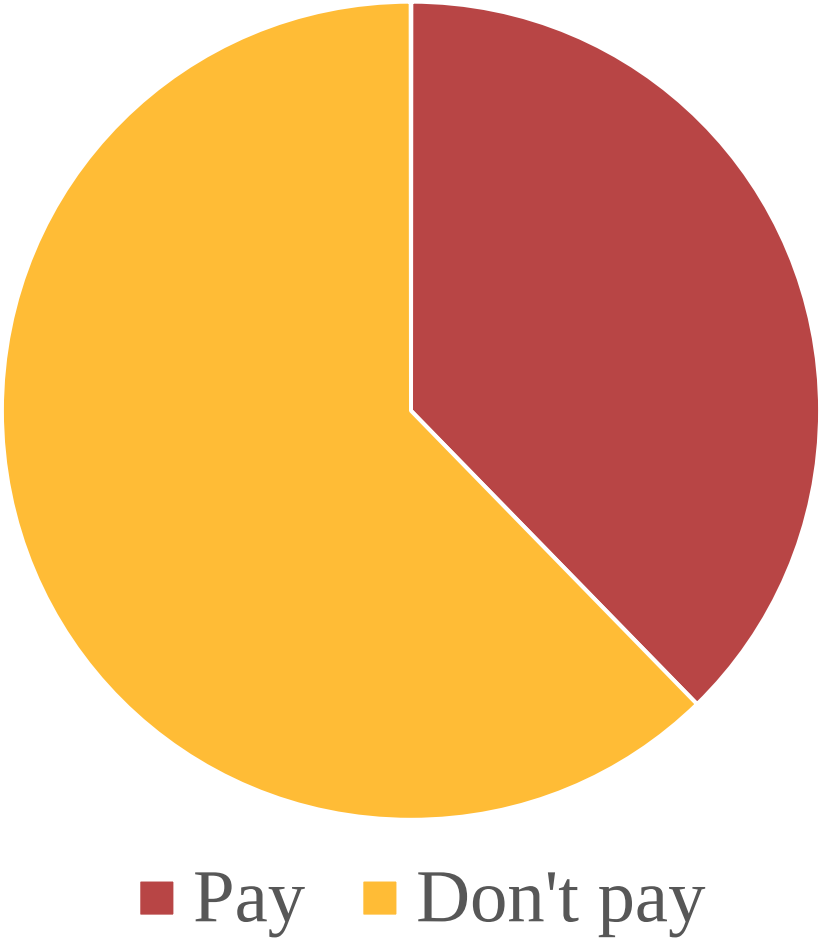
- How did Pokémon GO affect the *movement* of people?
- How did it affect *payment*?
- What is the impact of *alternate* reality?
- What is the impact of *augmented* reality?

Paying Users: Kongregate



Emily Greer, “Core Games, Real Numbers”, GDC 2011

Paying Users: *Pokémon GO*



Range:
1 to 300 EUR

ARPU:
35.67 EUR

Paavilainen et al. CHI 2017

% who made purchase in new place

46%

Colley et al. CHI 2017

Questions:

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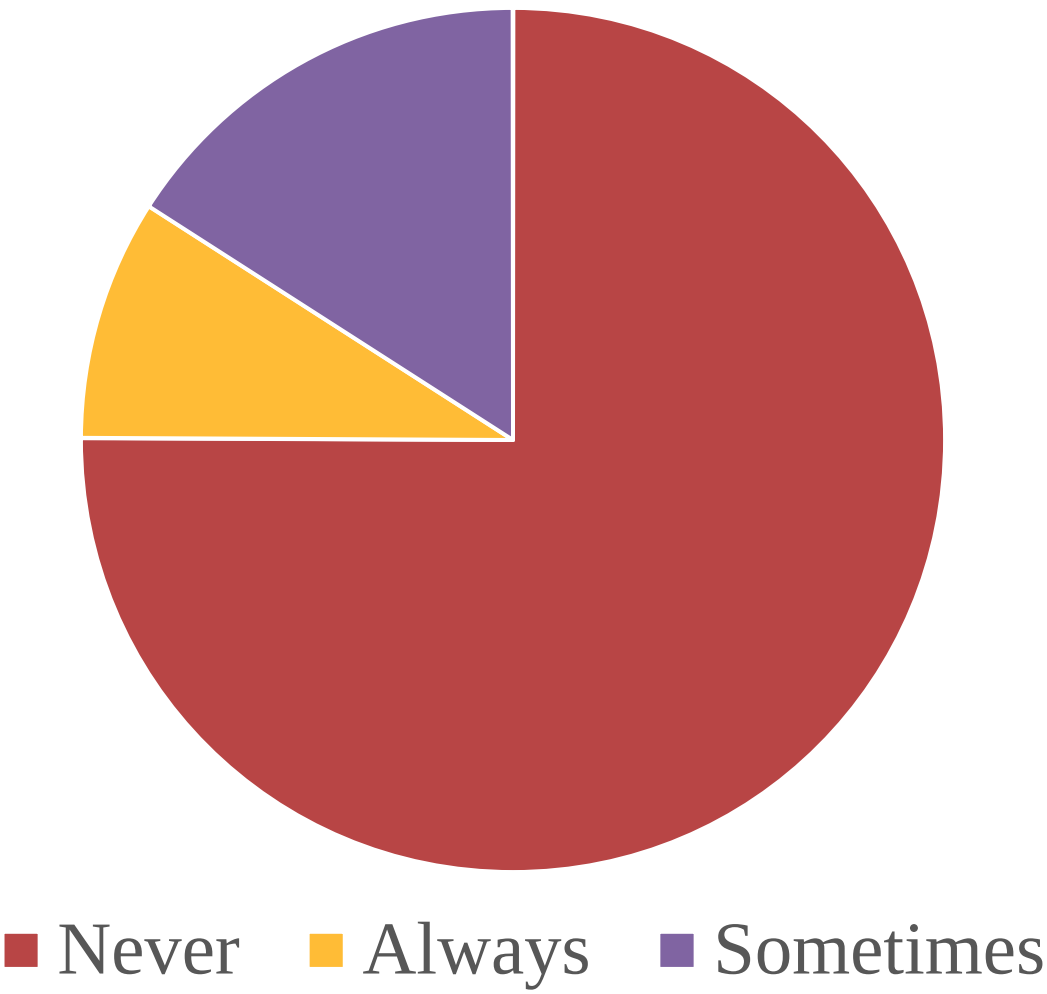
Use of Augmented Reality

Paavilainen et al. CHI 2017

Use of Augmented Reality



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5-minute pair discussion

- What makes a location-based game work well?
- What are the challenges?
- Why did *Pokémon GO* ***specifically*** do so well?

The Good

"What things make *Pokémon GO* fun to play?"

- globally well-known brand
- moving in the real world
- sociability

Paavilainen et al. CHI 2017

The Good

"What things make *Pokémon GO* fun to play?"

- moving in the real world (413 users)
- sociability (348 users)
- globally well-known brand (131 users)

Paavilainen et al. CHI 2017

The Bad

"What things about playing *Pokémon GO* do you dislike?"

- bad behavior from other players
- technical problems
- unequal gaming opportunities
- unpolished game design

Paavilainen et al. CHI 2017

The Bad

"What things about playing *Pokémon GO* do you dislike?"

- technical problems (285 users)
- unpolished game design (194 users)
- unequal gaming opportunities (148 users)
- bad behavior from other players (109 users)

Paavilainen et al. CHI 2017

Case study: 3D reconstruction

Agarwal, Snavely, et al. ICCV 2009

Case study: 3D reconstruction

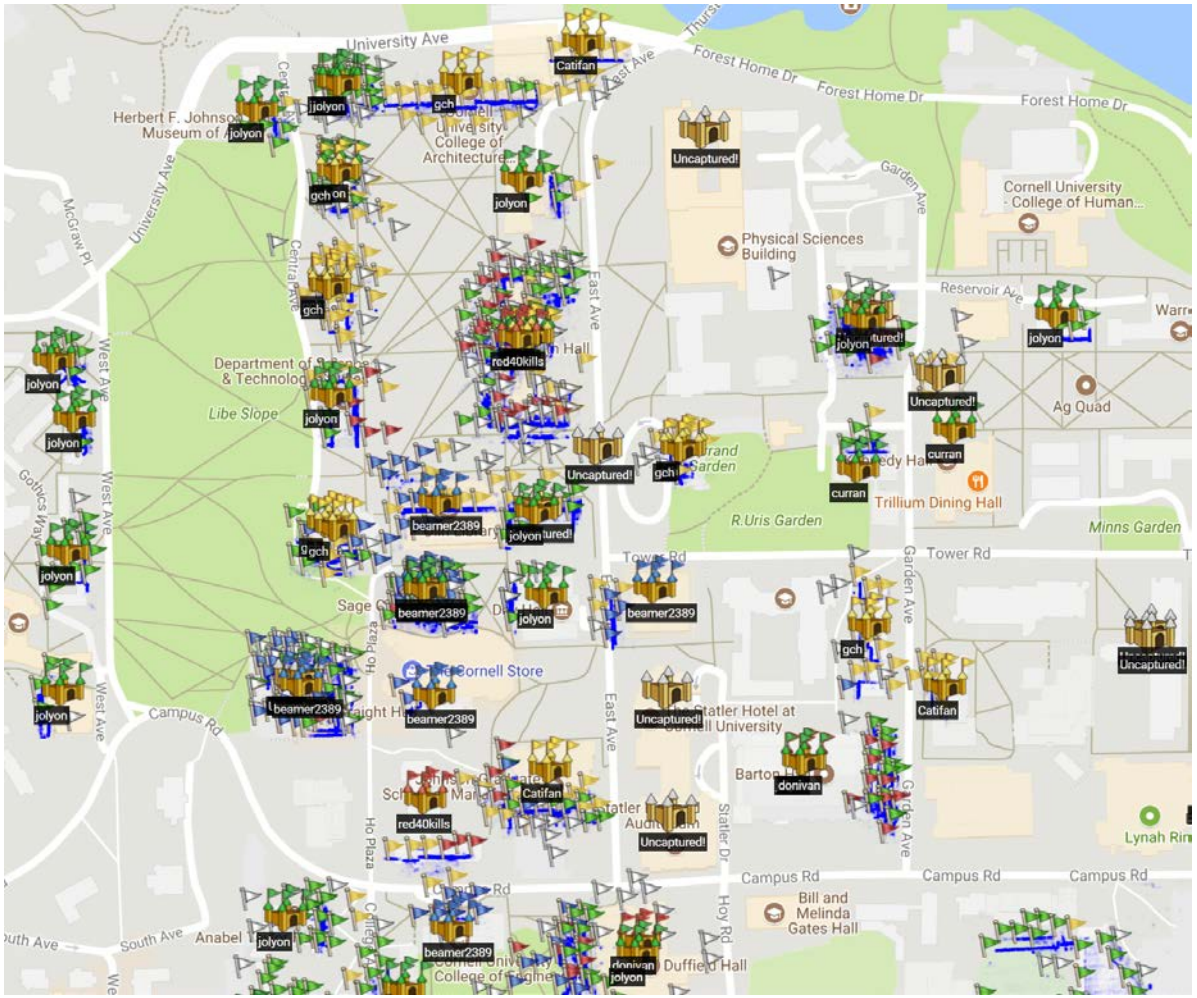
Agarwal, Snavely, et al. ICCV 2009

Case study: 3D reconstruction game

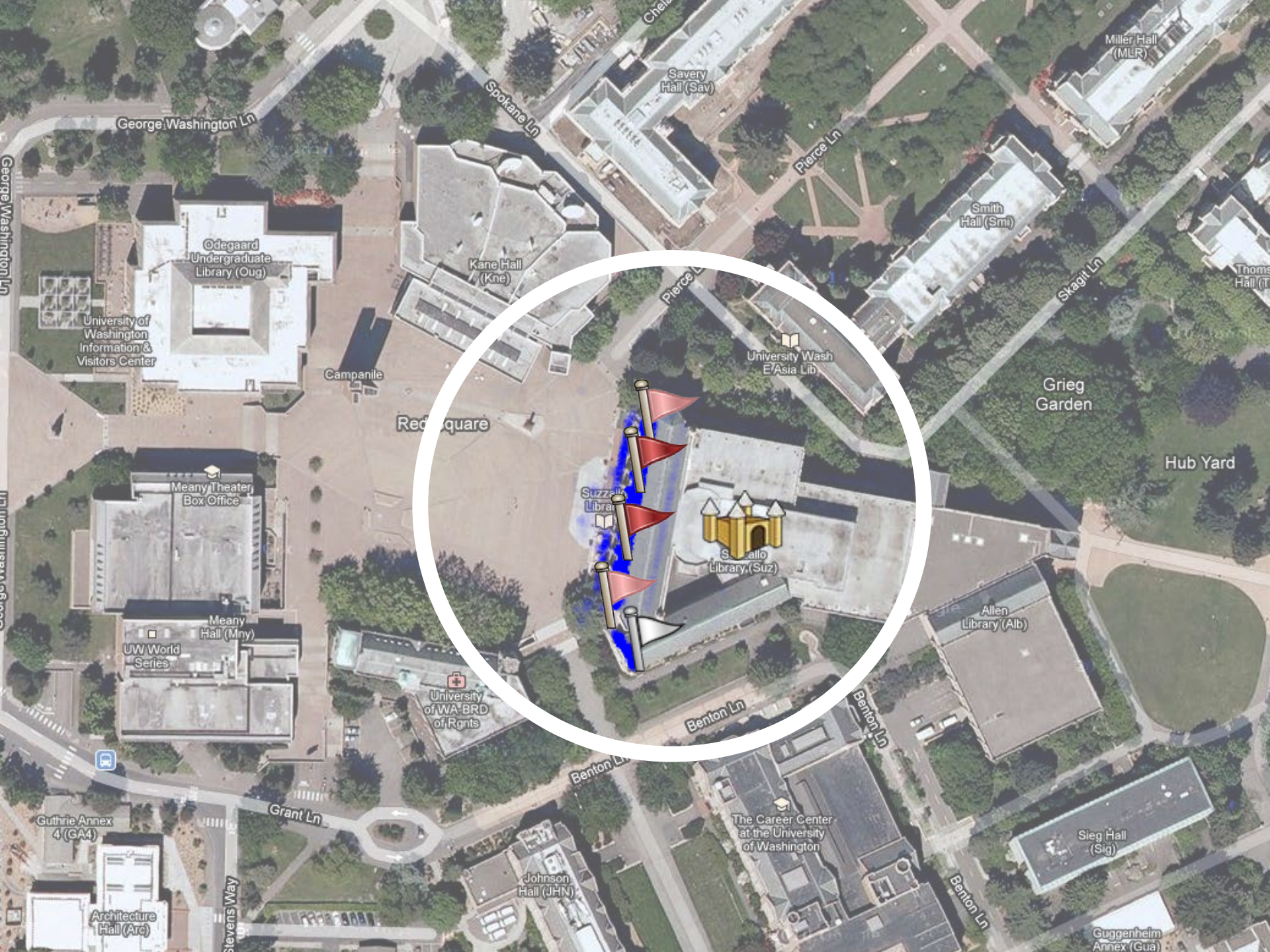
- Can we incentivize people to take pictures?
- Can we get pictures from less common angles?
- Can we make this fun?

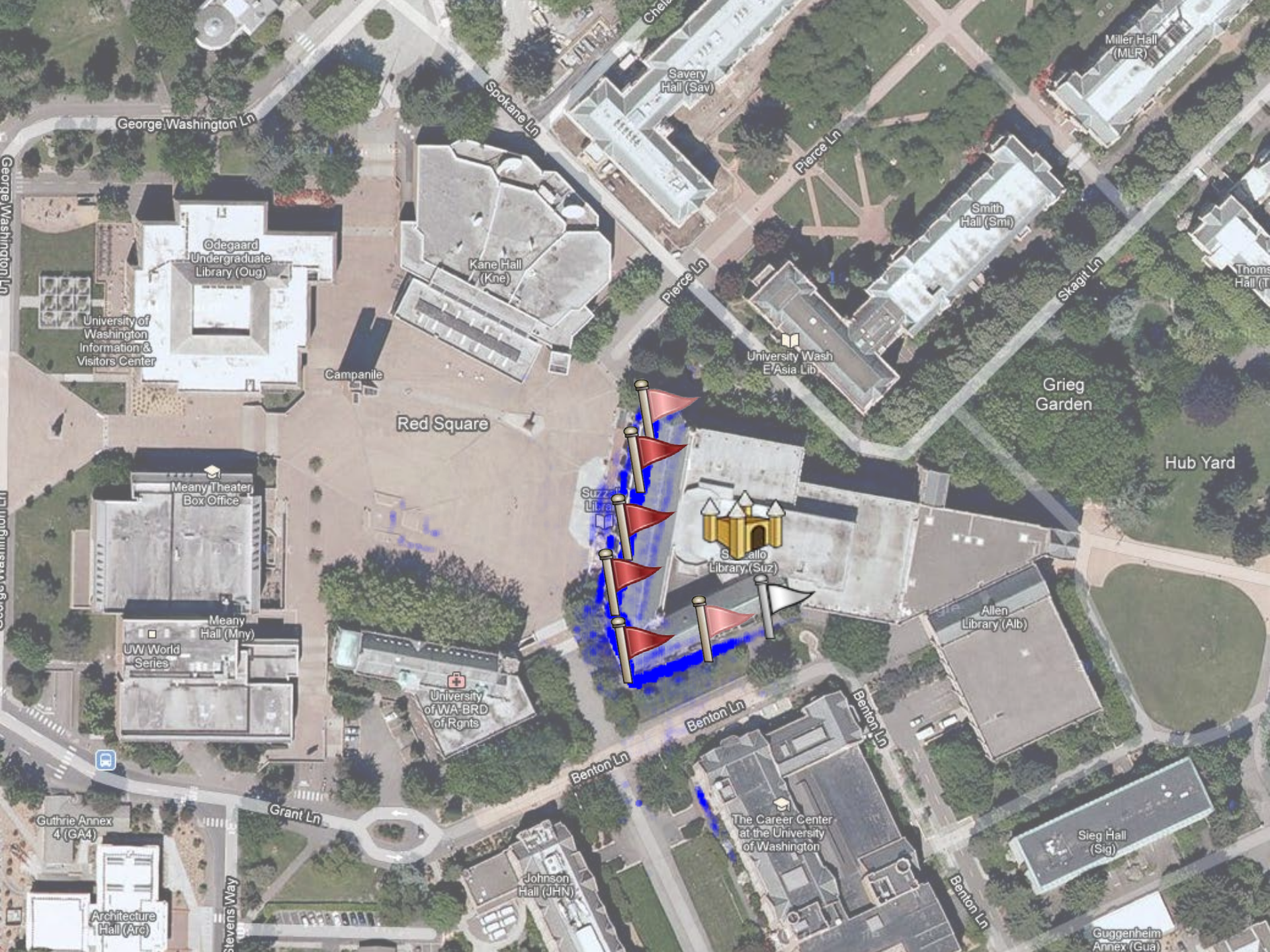
Tuite et al. CHI 2011

PhotoCity



Tuite et al. CHI 2011


George Washington Ln
Spokane Ln
Savery Hall (Sav)
Miller Hall (MLR)
Pierce Ln
Smith Hall (Smi)
Skagit Ln
Odegaard Undergraduate Library (Oug)
Kane Hall (Kne)
University of Washington Information & Visitors Center
Campanile
Red Square
University Wash E Asia Lib
Grieg Garden
Hub Yard
Meany Theater Box Office
Meany Hall (Mny)
UW World Series
University of WA BRD of Rgnts
Benton Ln
Allen Library (Alb)
Grant Ln
Guthrie Annex 4 (GA4)
Architecture Hall (Arc)
Stevens Way
Johnson Hall (JHN)
The Career Center at the University of Washington
Sieg Hall (Sig)
Guggenheim Annex (Gua)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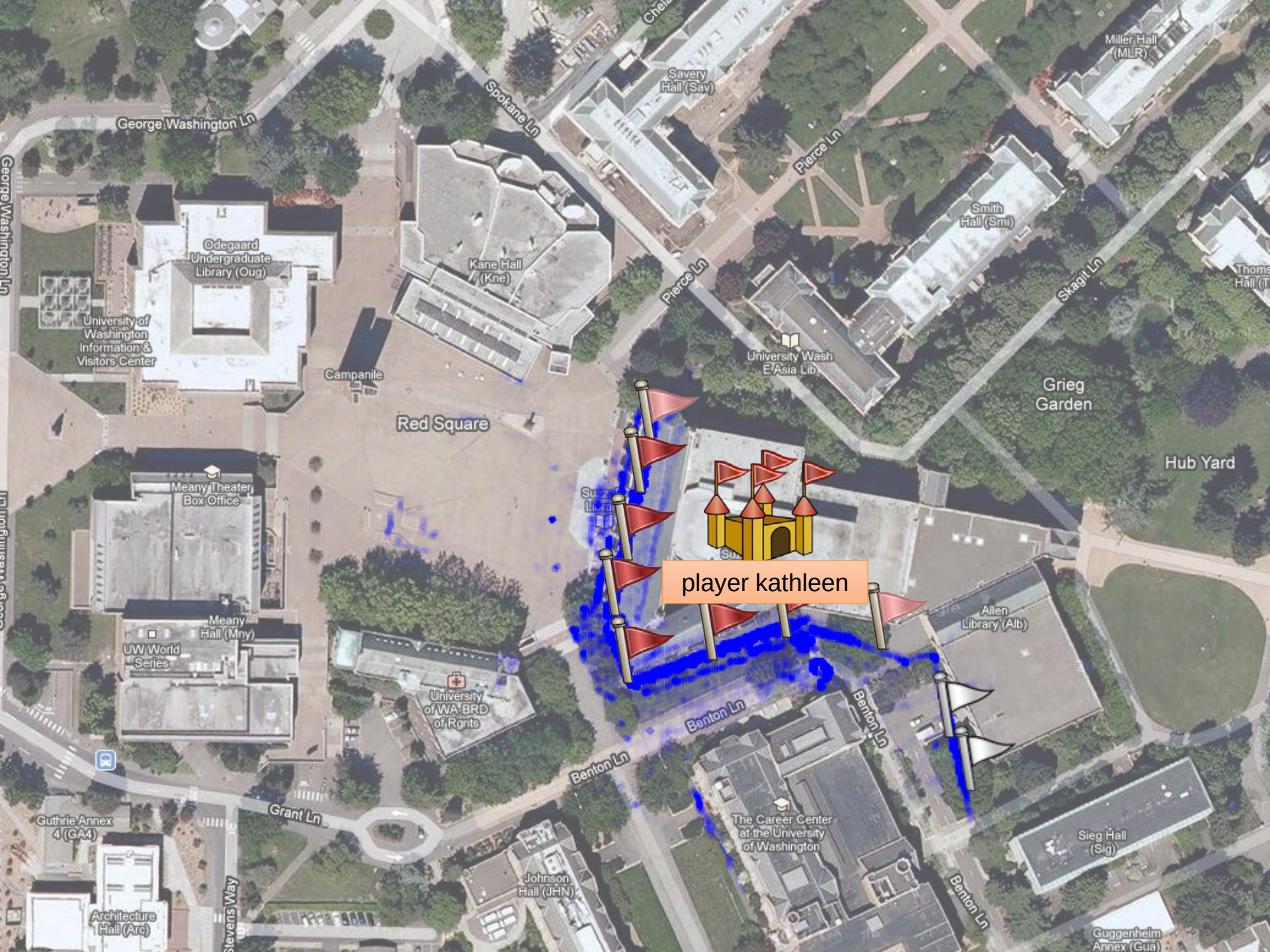
player kathleen
Red Square
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Skagit Ln
Benton Ln
Grant Ln
Stevens Way

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Skagit Ln
Wahkiakum Ln
University Wash E Asia Lib
Grieg Garden
Hub Yard
dlev
bryce
Stevens Way
The University of Washington Club (Fac)
Mason Rd
Physical Plant Office Bldg (Ppo)
Benton Ln
Argentu
Emma
falthra
Cunningham Hall (Ich)
Guggenheim Annex
Aerodynamics Lab (Adl)
Plant Operations (Pob)
Atmospheric Sciences - Geophysics (Atg)
Drumheller Fountain
Aerospace Research Bldg (Aer)
Okanogan Ln
Jefferson Rd
Chemistry Library Bldg
Lewis Ln
Stevens Way

Photocity

Tuite et al. CHI 2011

Tuite et al. CHI 2011

Tuite et al. CHI 2011

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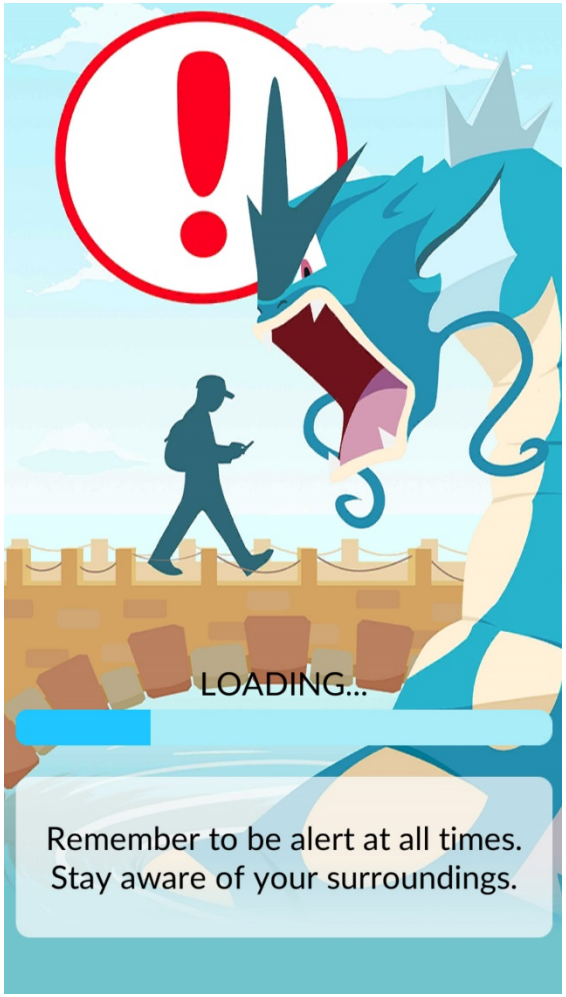
Dangers of increased movement



% who hit or almost hit something

33%

Most common culprits:

- signs
- poles
- other people

Colley et al. CHI 2017

% who put personal safety at risk

11%

Colley et al. CHI 2017

Jesse Schell DICE 2010

What do we think?

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Reminders for Friday

- Check logging
- Check logging again