CITY PARKS ALLIANCE

April 19, 2023 | 2:00-3:00 pm ET

USING TECHNOLOGY TO MEASURE PARK USE

MODERATOR

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ACCREDITATION AVAILABLE FOR:

APA

LA CES Landscape Architecture Continuing Education System™

NEW!
General CEUs

SHELBY FARMS
PARK
ONE OF AMERICA'S
GREAT URBAN PARKS

SHELBY FARMS
PARK
4,500 acres of green space in Memphis, TN

SHELBY FARMS PARK | visitors

Eco-Counters

BENEFITS

Valuable for estimating visitor counts and usage

CHALLENGES

Only counts cars, bicycles, or people that pass them

Visitors could be counted multiple times

Doesn't capture demographics, geography or other descriptors

Technology Goals

VISITOR USAGE

More accurate counts of who, when, where and where from

BEHAVIORS + NEEDS

Demographics, socioeconomics and personas

Perceptions and levels of knowledge about the Park

Who isn't coming to the Park and why? What are their barriers?

Values-Driven Technology

TIED TO OUR CORE VALUES

Visitors are the heart of our work

Collaborate with community

Honor all voices

Feedback is a gift

With and For the Public

Ambitious public outreach and input efforts

Wide cross-section of Memphis and Shelby County residents

Both visitors and non-visitors

Ensure that Park growth
and enhancements align with
community needs and wishes

Values-Driven Technology

VALUES & MISSION MATTER

How will better understanding our visitors:

Create better park experiences for them?

Help connect them to the nature in our care?

Build visitors up into supporters, volunteers and advocates?

Technology Partnership

SHELBY FARMS PARK

+

Memphis TOURISM

Collaborate with our local convention and visitors bureau, Memphis Tourism

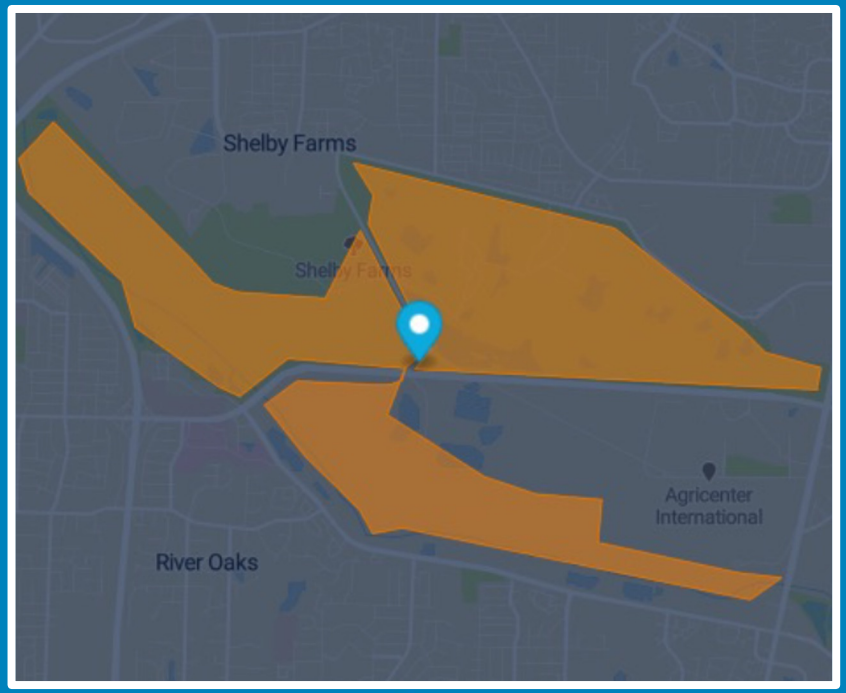
Geofences around Memphis-area sites – including Shelby Farms Park

Anonymous cell phone location data for more accurate visitor counts

Upscaled with Census Bureau data

What is a Geofence?

Virtual geographic boundary, defined by GPS



shelbyfarmspark.org

What is a Geofence?

+

Triggers a "count" when a mobile device enters or leaves a particular area, tracked and organized by software

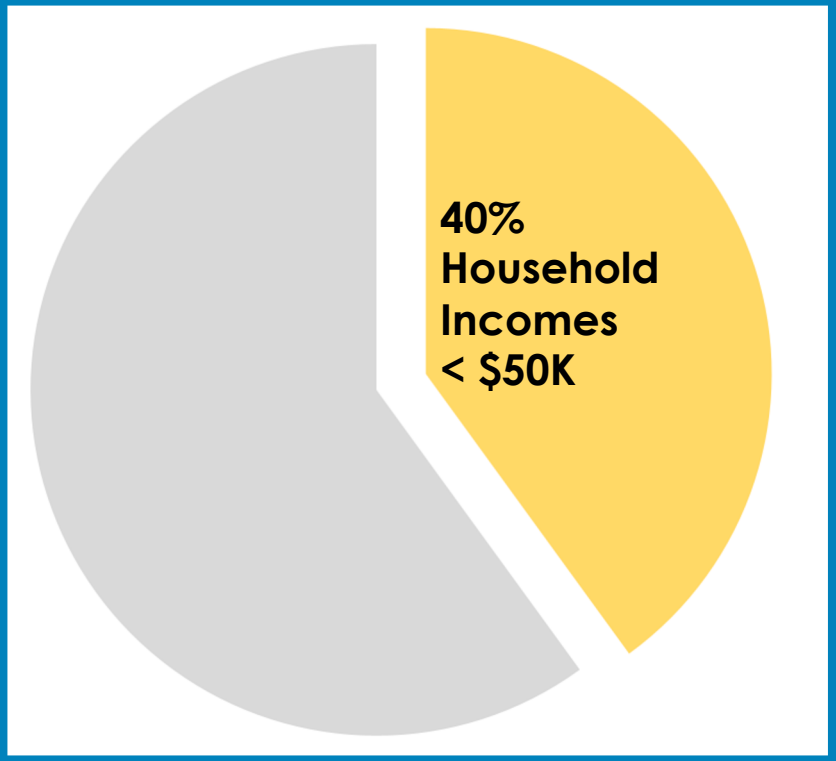
Upscaled with estimated Census Bureau data

Anonymous + Protected (not tied to specific individuals)

Does not capture every cell phone, but instead pulls a sample

Preliminary Data Estimates

Example:



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Preliminary Data Estimates

SHELBY FARMS PARK

+

Memphis TOURISM

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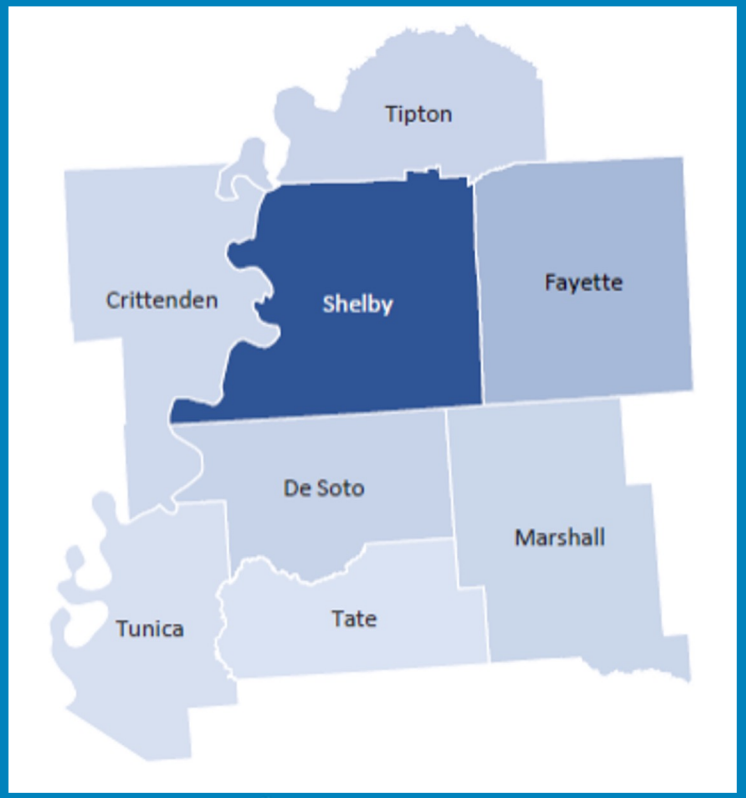


Daily Avg: 6,200+ Visits

BLENDED APPROACH

IN-HOUSE DATA

Donors, event attendees + Park Friends membership program
Park visitors from every ZIP code in Memphis and Shelby County

OBSERVATIONAL DATA

Conducted by the local Rhodes College faculty and students

Park used by a racially diverse group of people, with ages ranging from young children to the elderly

Transitional Phase for Tech

Next: Focus on igniting action

Gathering, analyzing and strategizing about how we interact with visitors, supporters and others in a way that inspires them to do something:

Visit more
Volunteer
Donate
Spend money
Attend an event
Engage + share

ENDLESS POSSIBILITIES

DOUBLE-EDGED SWORD

Offers tons of visitor data, which is great. But it can be like drinking out of a fire hose.

THOUGHTFUL APPROACH

Need to be strategic about which data points are most impactful and actionable. Weigh our capacity to act on data and build strategies we know we can accomplish and that will deliver the most meaningful results for our visitors and community.

GEOFENCING LIMITS

Doesn't capture every cell phone.

Excludes international phones, people 16 or younger, and phones with location services turned off

Difficult to capture a narrow or winding area by itself, such as with a trail

High cost

Not a "magic bullet" solution

ENGAGEMENT-BASED LEARNING

Blend qualitative and quantitative to create a complete picture

Use qualitative tools (e.g. surveys) to assess and understand what technology alone can't tell us:

Perceptions
Knowledge
Wishes + desires for the Park

TIPS + TAKEAWAYS

DO YOUR HOMEWORK

Who else do you know who uses tech like this? Talk to them.

Explore all tech options. Haggle and ask for things like nonprofit discounts from vendors.

PARTNER

Is there an option like Memphis Tourism in your city?

TIPS + TAKEAWAYS

SET EXPECTATIONS

Understand that tech is not a "magic bullet." You'll need to blend with other research to create a full picture.

PLAN

Create a strategy at the beginning so you know what data you need and how you want to use it. This will tell you what tools you'll need.

TIPS + TAKEAWAYS

IMPLEMENT IN PHASES

It's easy to get overwhelmed, so take your time and roll it out at a pace you can manage.

It's OK if you're between phases – we are!

LET'S CONNECT!

Ben Nemenoff,
Shelby Farms Park Conservancy
Director of Development

bnemenoff@shelbyfarmspark.org

(901) 222-7251

THANK
YOU!
PRICE
CHOPPER
SHELBY FARMS
PARK

DETROIT RIVERFRONT CONSERVANCY

FOR EVERYONE. FOR 20 YEARS.

Rachel Frierson,
Senior Director of Programs and Public Spaces
Rachel.Frierson@detroitriverfront.org

"BEAUTIFUL, EXCITING,
SAFE, ACCESSIBLE..."

...WORLD-CLASS
GATHERING PLACE...

...FOR ALL"

FOUNDING PARTNERS
CITY OF DETROIT
THE KRESGE FOUNDATION
gm

ATWATER STREET

CULLEN PLAZA

DEQUINDRE CUT

DEQUINDRE CUT

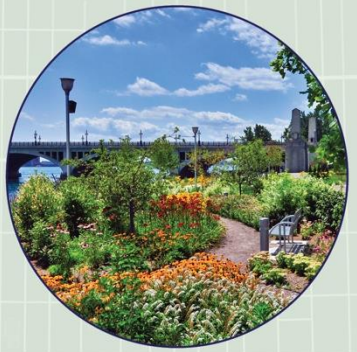
WEST RIVERFRONT PARK

GM PLAZA

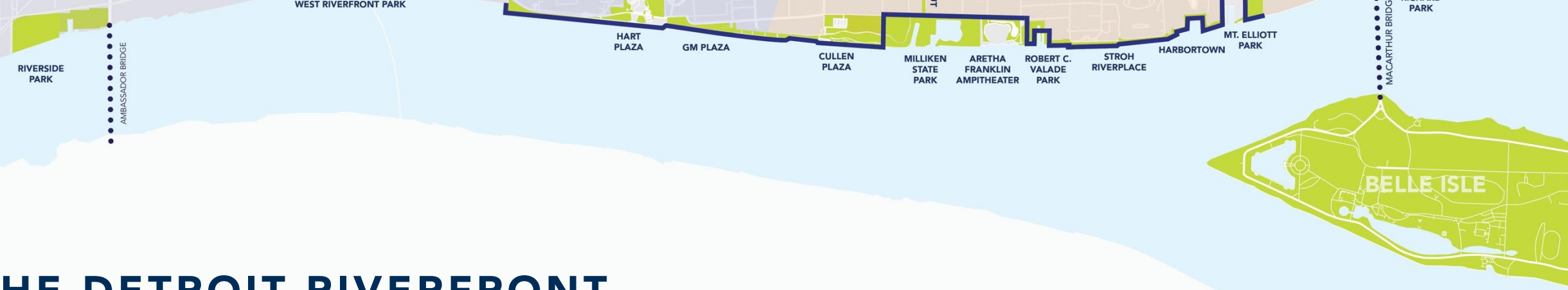
CULLEN PLAZA

DEQUINDRE CUT

MT. ELLIOTT PARK



GABRIEL RICHARD PARK



THE DETROIT RIVERFRONT

EXISTING RIVERWALK

PARKS & GREENWAYS

RALPH C. WILSON, JR. CENTENNIAL PARK

SOUTHWEST GREENWAY

WEST RIVERWALK

ROBERT C. VALADE PARK

DENNIS ARCHER GREENWAY

UNIROYAL PROMENADE

COMPLETING THE VISION

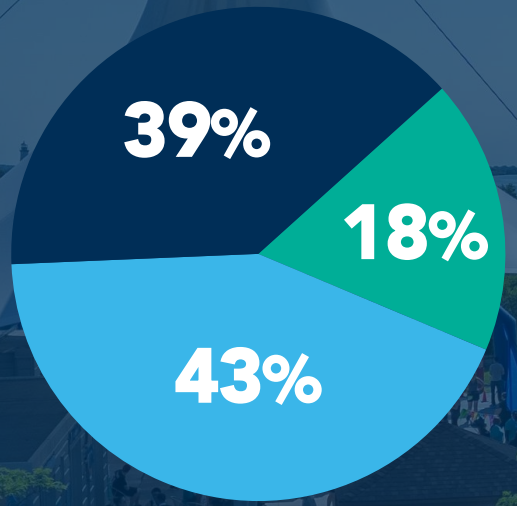
EXISTING RIVERWALK

FUTURE RIVERWALK

PARKS & GREENWAYS

DETROIT RIVERWALK
BEST IN THE USA

DETROIT RIVERFRONT COMMUNITY



39% Detroit

43% Southeast Michigan

18% Other Michigan, USA & International

3,000,000+
Annual Visitors

320,000+
Program Participants

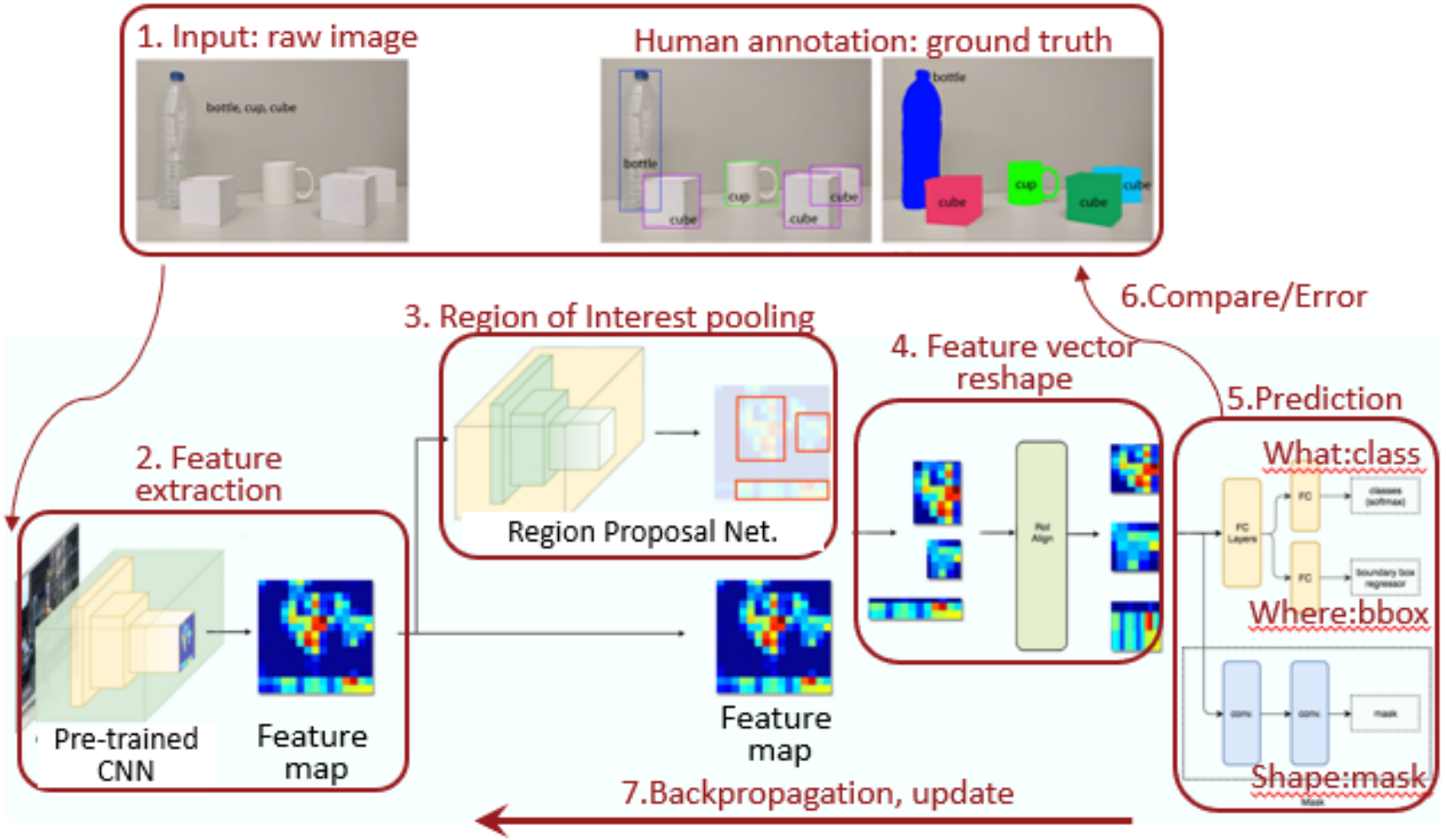
84% of Detroiters
Have visited the Riverfront in the past year.

MEASURING USE THROUGH EXISTING INFRASTRUCTURE

DETROIT RIVERFRONT CONSERVANCY

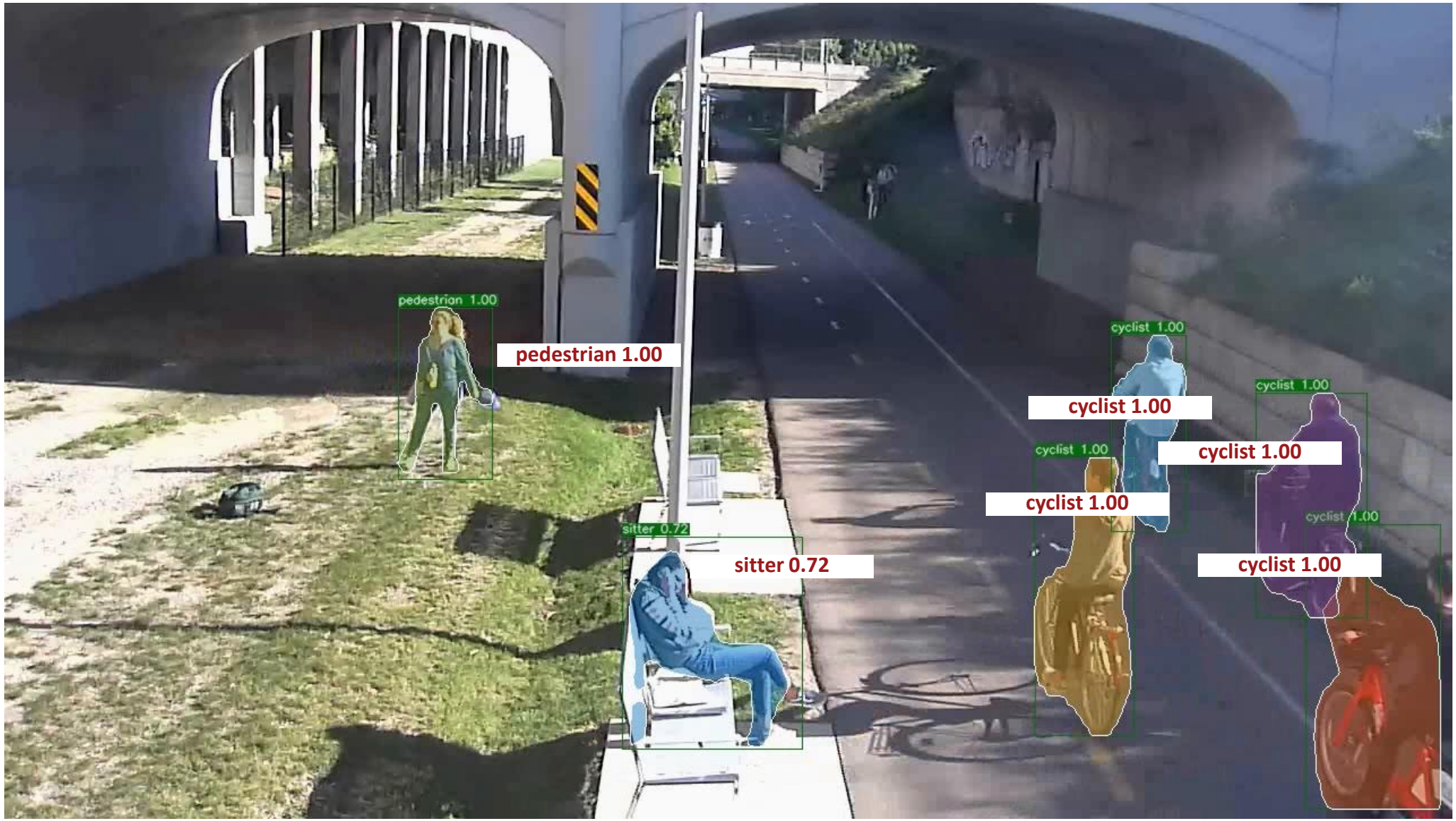
UNIVERSITY OF MICHIGAN PARTNERSHIP

TRAINING STAGE: ALGORITHM



Objection detection algorithm

RESULTS: PEOPLE DETECTION



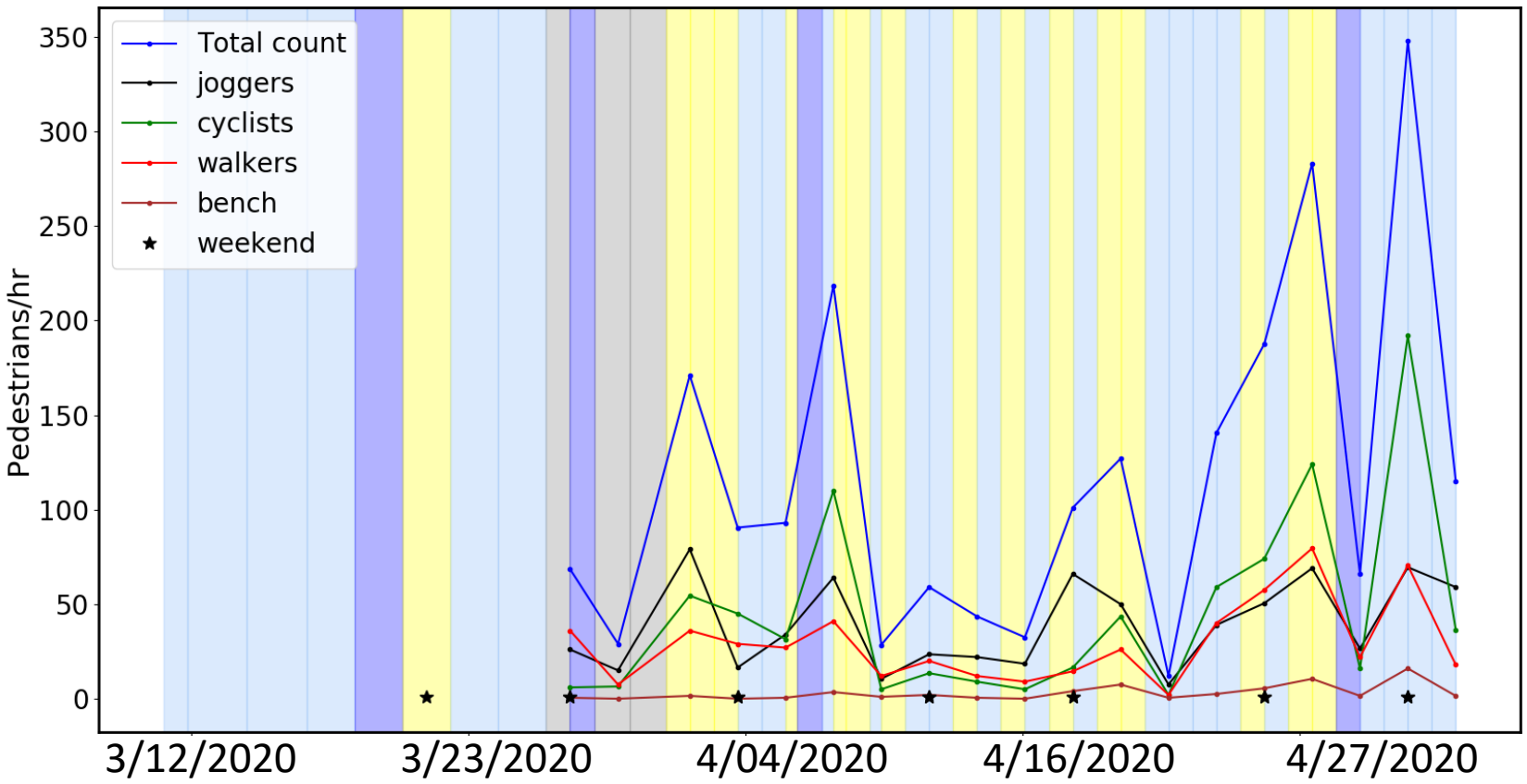
Cloudy

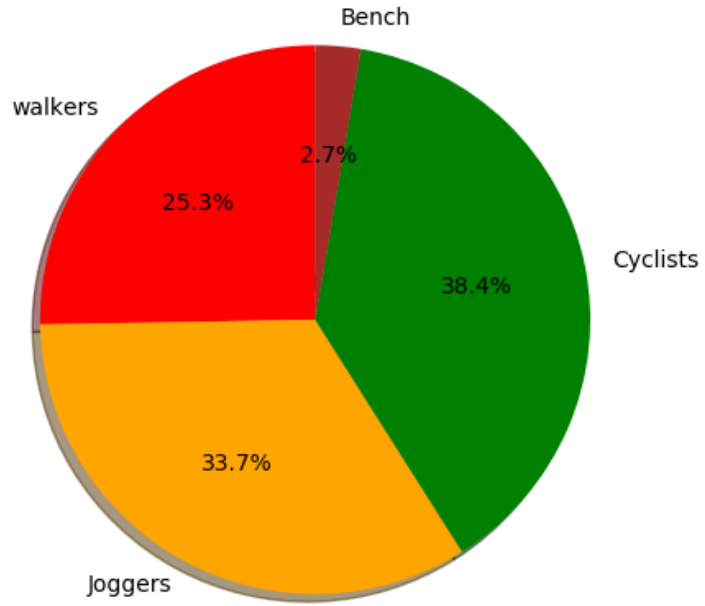
Rain

Clear

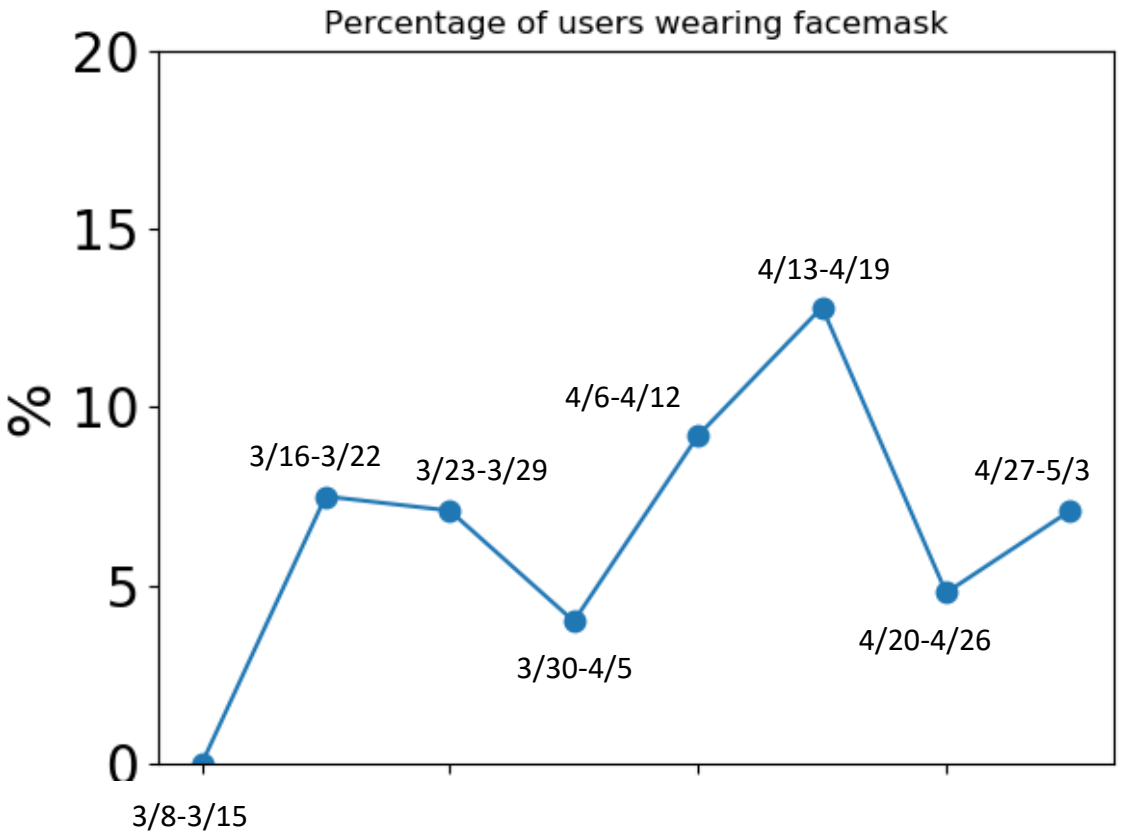
Overcast

Evening

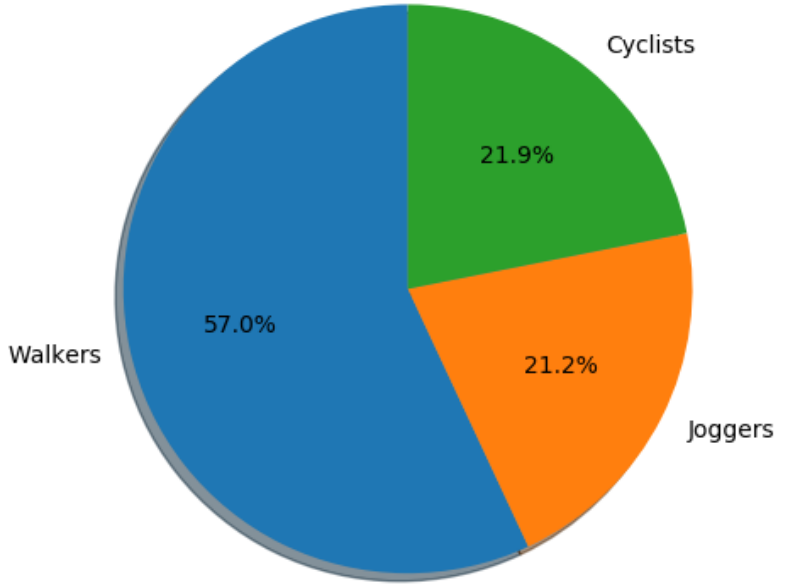




TOOLS DURING THE PANDEMIC



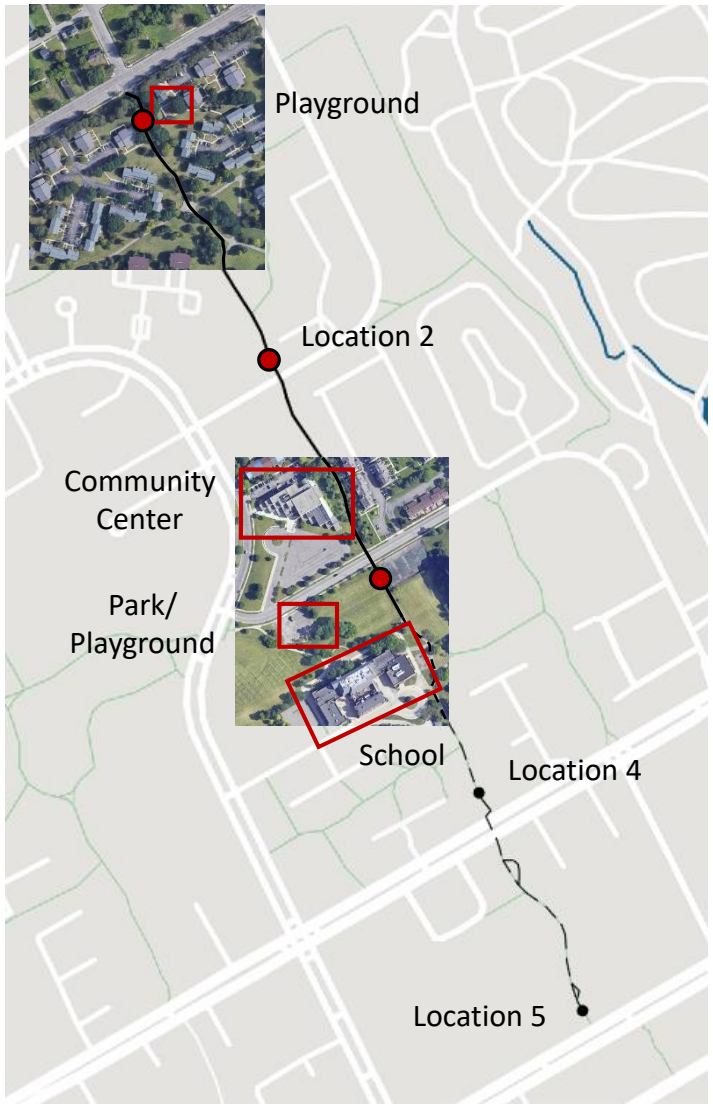
Who is wearing the detected masks?



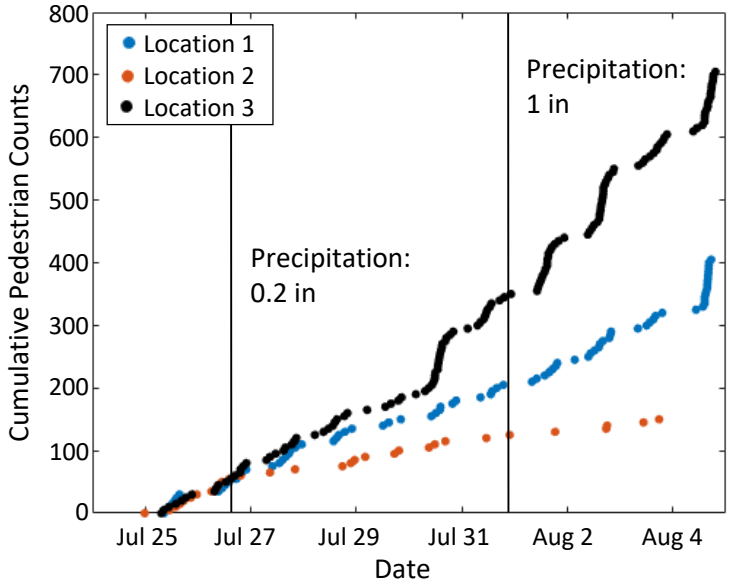
ARCHER GREENWAY

STOP
NO MOTOR VEHICLES
EMERGENCY
EMERGENCY

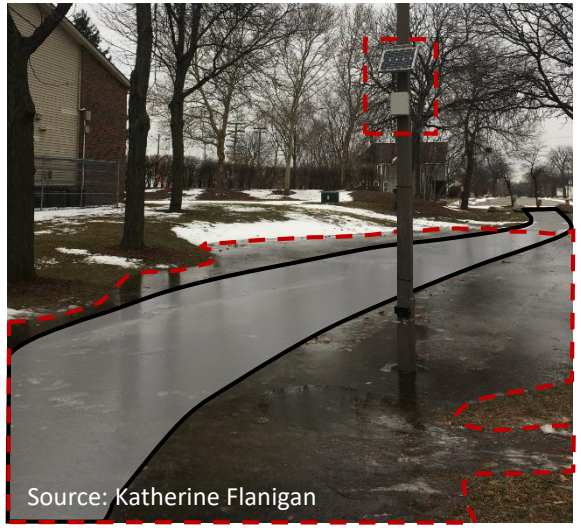
JOS CAMPAU GREENWAY - 2019



Jos Campau Cut



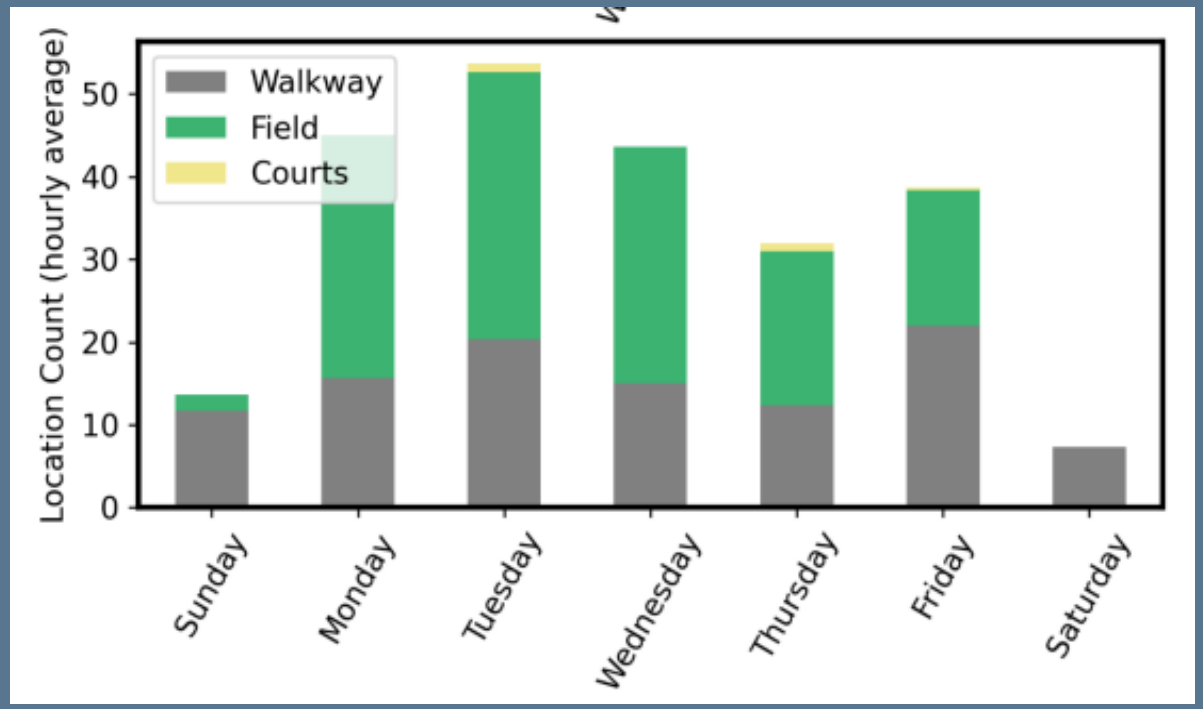
Location 2

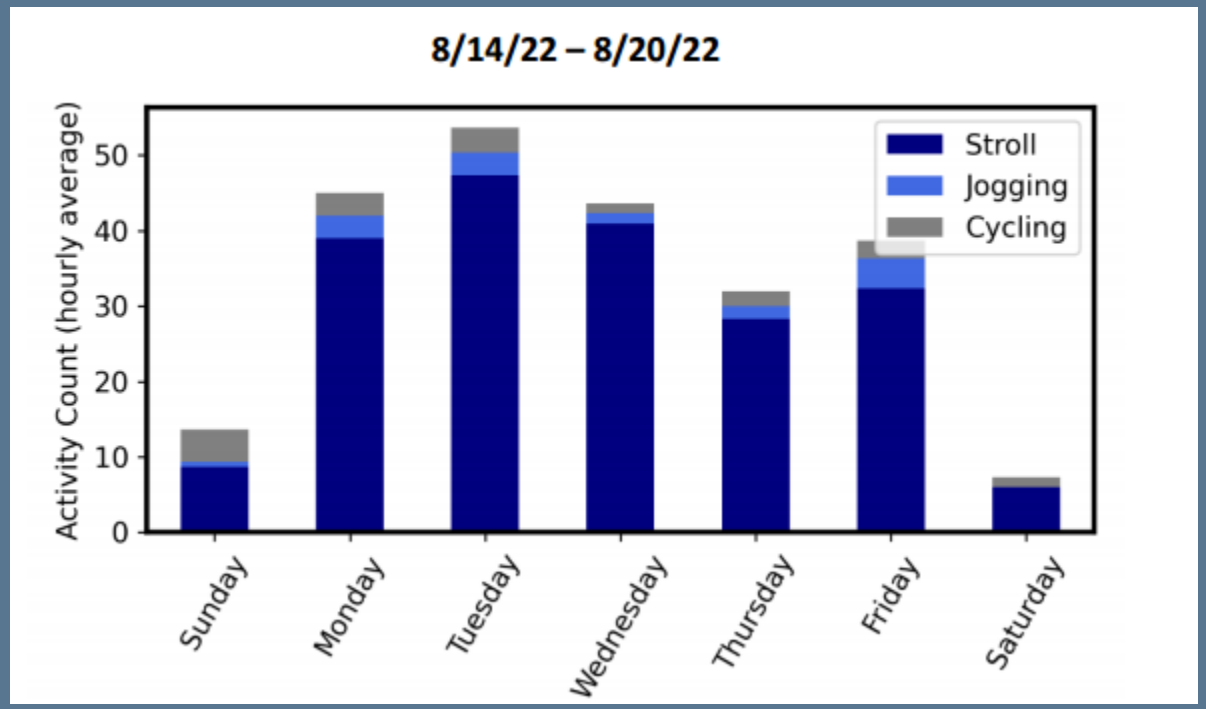


Location 4

P24
P25

ARCHER GREENWAY + UM DATA

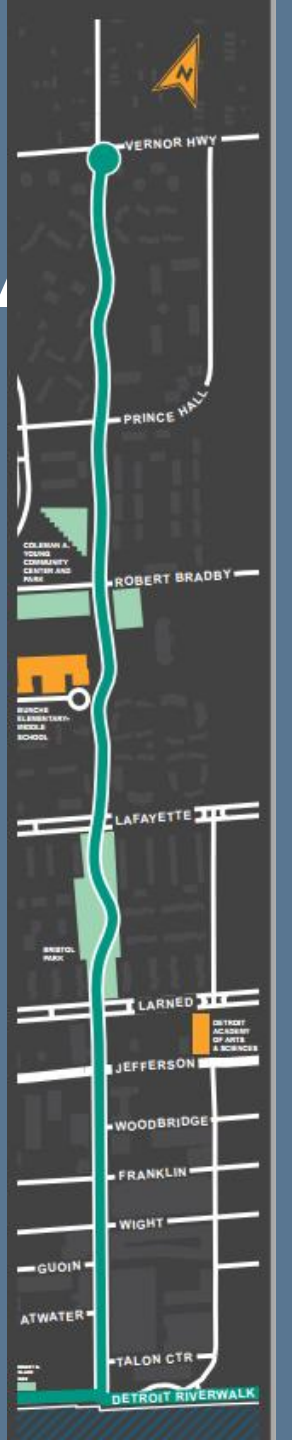




INTERVENTIONS

Greetings from the

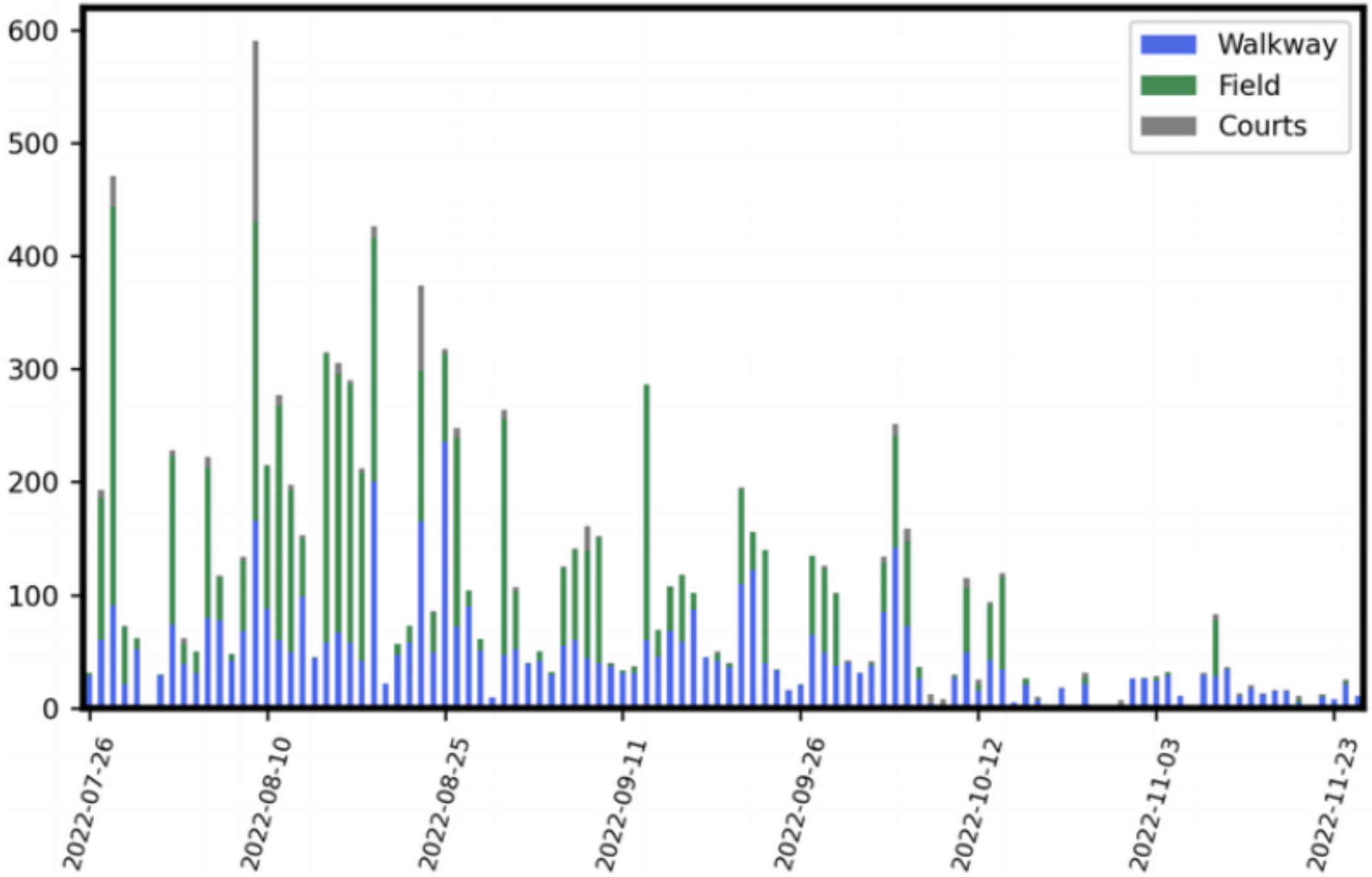
MAYOR DENNIS W. ARCHER GREENWAY



CITY OF DETROIT

DETROIT RIVERFRONT CONSERVANCY

Detroit Riverfront
83K followers • 394 following



Ice cream:

Walkway 14 days prior: 695 patrons
Walkway 14 days after: 1057 patrons
52% increase

Mailer:

Walkway 7 days prior: 270 patrons
Walkway 7 days after: 298 patrons
10% increase

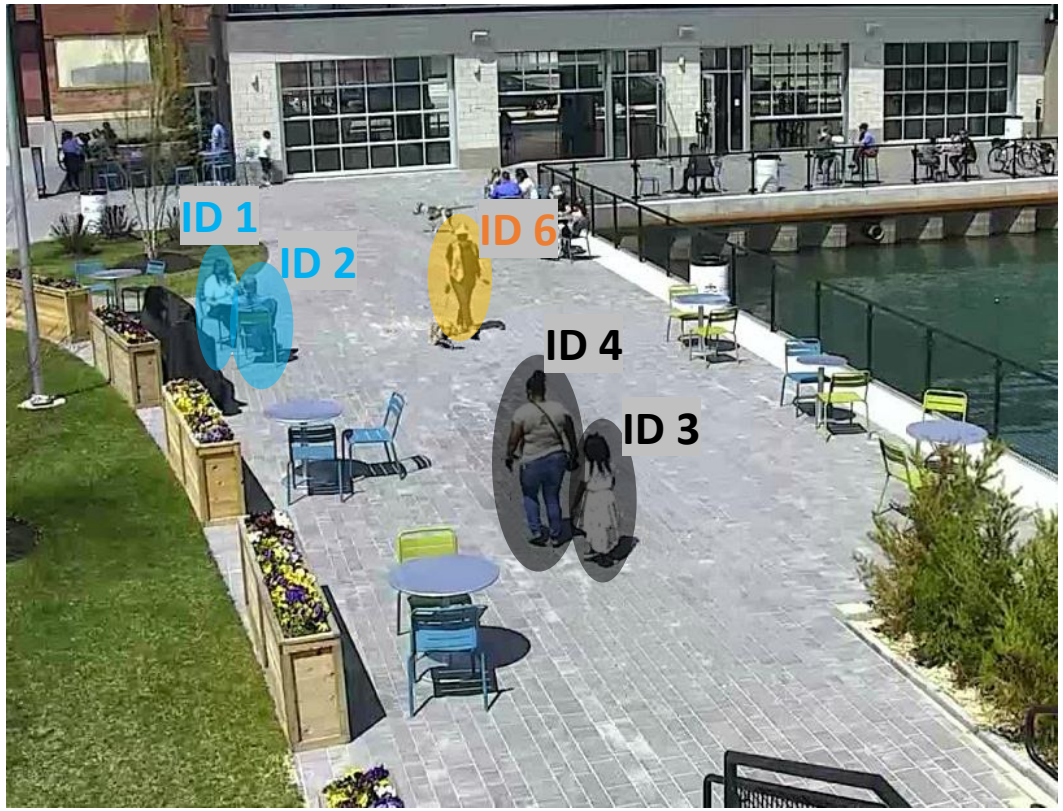
BUILDING A SOCIABILITY FRAMEWORK

Movement layer: Stroll, Jog, Standing, Sitting (w/ dog/stroller), cyclist

Location/furniture layer: Dining, Plaza, Bench, Bike lane, river view fence, fountain, etc.

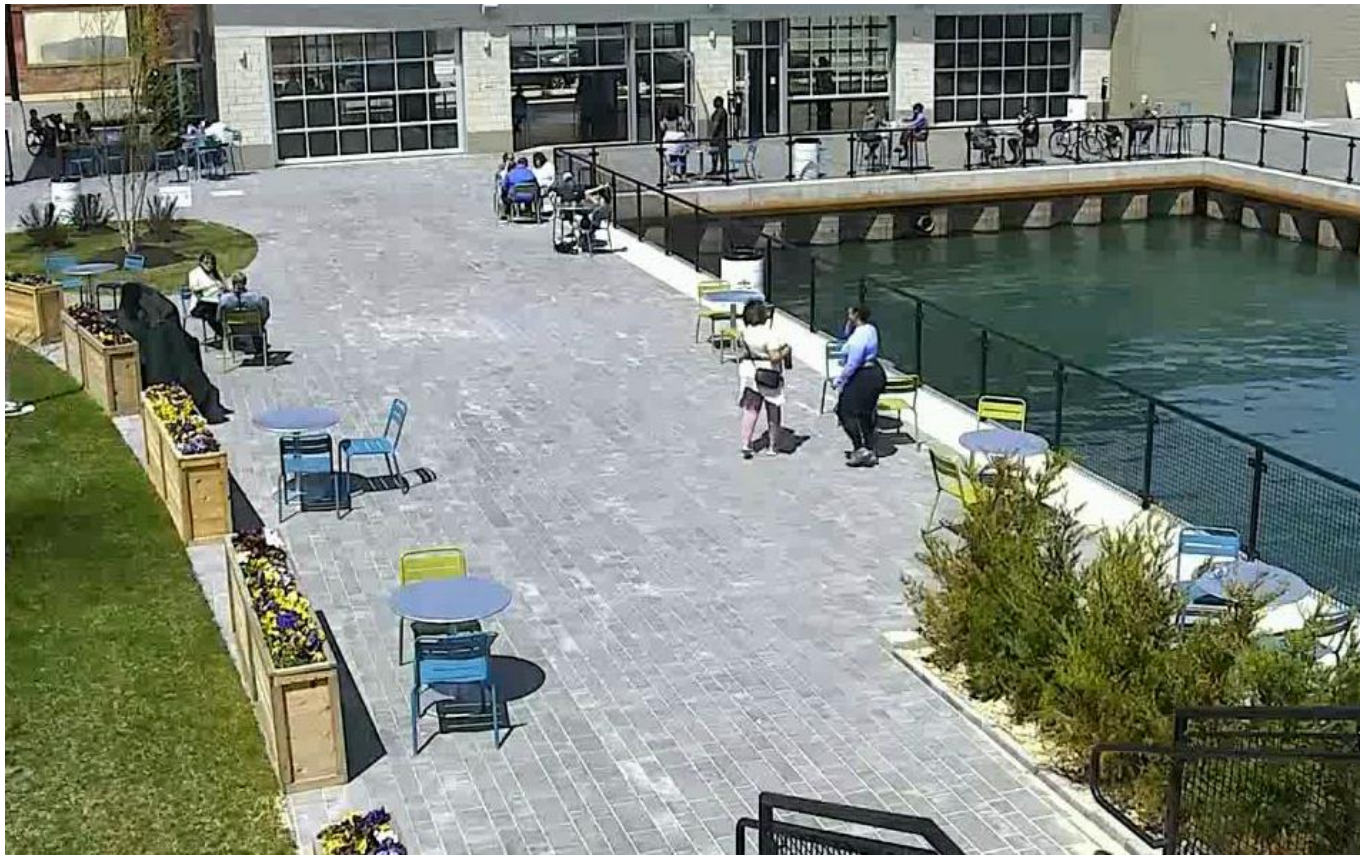
Social layer: Passive, Fleeting, and Enduring relationships

Social Activity report:
ID4: Enduring stroll in Plaza (with ID 3)
ID1: Enduring sitting in dining area (with ID 2)
ID6: Passive stroll with dog in Plaza



MEASURING SOCIALIBILTY

- JSON
  - Valade Park
    - Date
      - 5/24/21
        - Time
          - 2:00 PM
            - People
              - 1
                - Class : "Person"
                - Activities
                - Stroll
                - location : "Plaza"
                - Social : "Enduring"
                - Ass_Id
                - 0 : "2"
              - 2
                - Class : "Person"
                - Activities
                - Stroll
                - location : "Plaza"
                - Social : "Enduring"
                - Ass_Id
                - 0 : "1"
              - 3
              - 4
              - 6
              - 7
              - 11
              - 23
              - 28
              - 34



What we've learned

- Find a good research partner or service
- Ask big questions
- Physical counts vs Social counts
- How data explains the importance of parks

THANK YOU

DETROIT RIVERFRONT CONSERVANCY

CITY PARKS ALLIANCE

Thanks for joining us!

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