Project 412Connect: Bridging Students and Communities

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Grief to Action

- based in the Center for Analytical Approaches to Social Innovation (CAASI) at the University of Pittsburgh
- started from an open call to meet and talk after George Floyd's murder (May 2020)
- community/student-initiated data platforms to **support existing local efforts** against systemic racism
- word of mouth: ~150 people so far, all but ~8 are volunteers
- currently ~30 people across two working groups
  - *Allegheny County Policing Project (ACPP)*

    searchable library of 100+ Allegheny County police contracts to help citizens with fragmented policing

    Launching November 3rd!
  - *412Connect*

    local organization-curated platform to connect Black-owned businesses and university students through social media and online discovery

    www.412connect.org

Black-Owned Businesses and COVID-19

- Black-owned businesses are often geographically segregated from areas of high economic activity and target markets have insufficient information about them [29, 31]

- since the beginning of the pandemic, Black-owned businesses have closed at a rate of more than two times of that of their white counterparts and cash balances have decreased more than nine times that of their white counterparts [27]

- between February and April of 2020, the number of working Black business owners decreased by 41% in comparison to 32% of Latinx, 26% of AAPI, and 17% of white owners [26]

[26] Claire Kramer Mills and Jessica Battisto. 2020. Double Jeopardy: Covid-19's concentrated health and wealth effects in black communities.
[27] Lucas Misera. 2020. An Uphill Battle: COVID-19's Outsized Toll on Minority-Owned Firms.
[29] Sean F Reardon, Stephen A Matthews, David O'Sullivan, Barrett A Lee, Glenn Firebaugh, Chad R Farrell, and Kendra Bischoff. 2008. The geographic scale of metropolitan racial segregation.
[31] Devin Q Rutan and Michael R Glass. 2018. The lingering effects of neighborhood appraisal: evaluating redlining's legacy in Pittsburgh.

Grief to Action: Working Model and 412Connect Sub-Teams

problem scoping

prototype development

elicit feedback
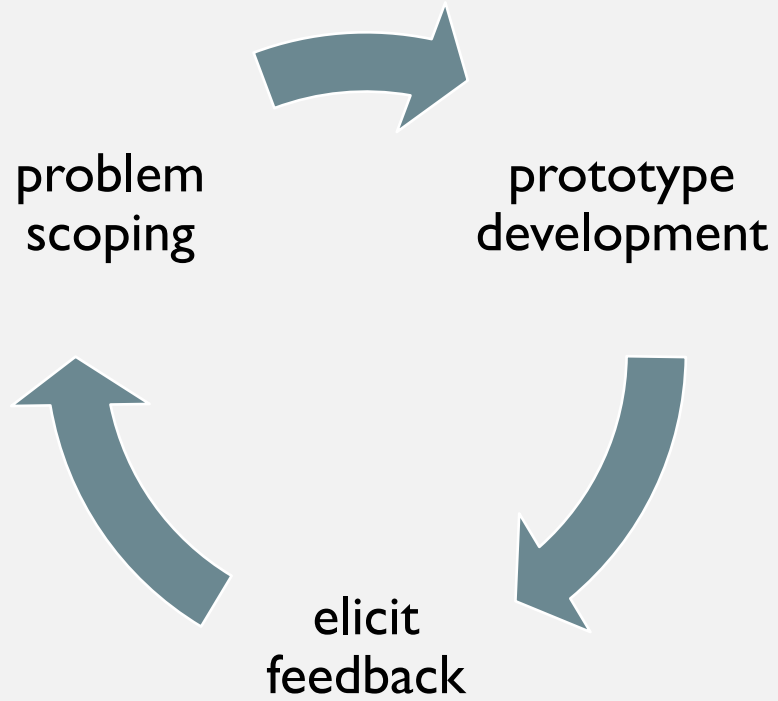
in addition to our community partners, we have sub-teams focused on

- community engagement

- platform design

- institutional support

- development

- UX design

- content curation

everyone meets weekly, sub-teams frequently have their own meetings

Black-Owned Business Survey (February and March 2021)

- surveyed 22 Pittsburgh Black business owners

- 85% of respondents ranked reaching new customer bases as an extremely important goal

- 61% felt inadequately linked to their community

- **85% felt inadequately linked to the university community and wanted to improve this connection**

- 54% desired increased social media support.
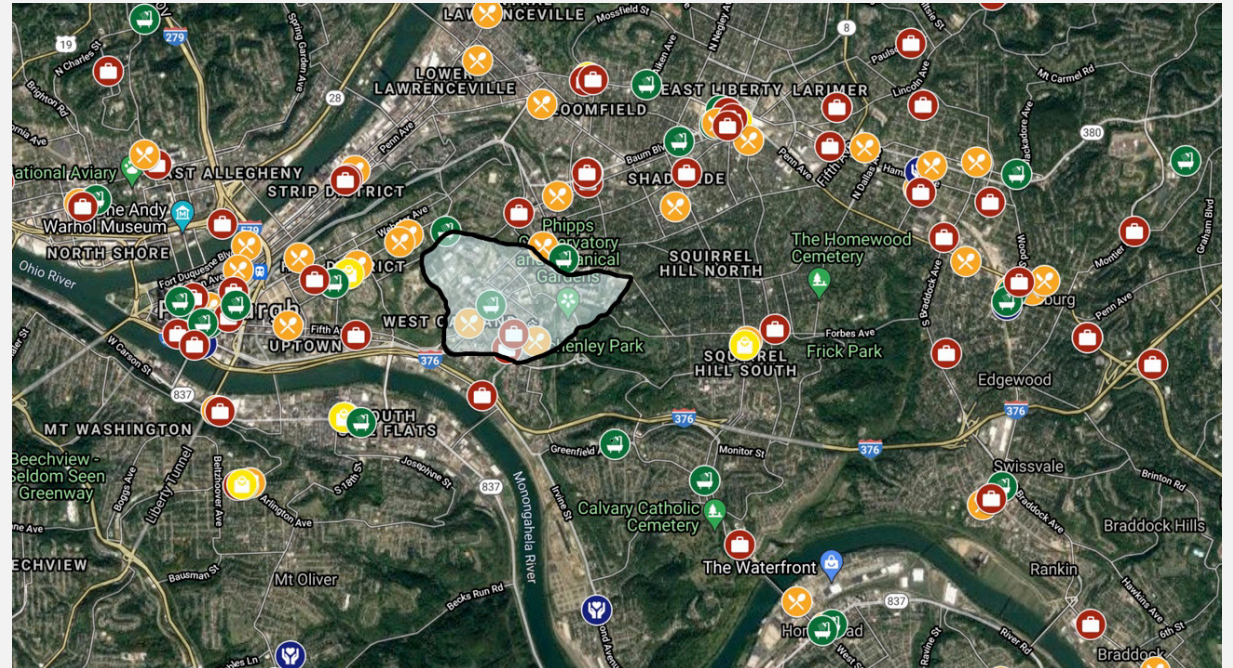
map of Pittsburgh Black-owned businesses created in collaboration with community partners

shaded region: University of Pittsburgh community

Student Survey (March 2021)

- surveyed 24 members of the University of Pittsburgh student body
- 92% of respondents have a desire to support and patron Black-owned businesses
  - **only 50% could name a local Black-owned business**
- respondents expressed that their greatest barriers to interaction with Black-owned business were a lack of knowledge about businesses and their services (92%), financial constraints (42%), and lack of transportation (21%)
- students are most likely to support Black-owned businesses through social media interaction and are most likely to visit Black-owned businesses in the food industry
- participants stated that they are more likely to visit businesses with good "word of mouth" reputation (100%), a strong online presence (92%), and unique services (83%)

Connecting the Surveys: Proposed Platform Goals

Black-Owned Businesses

What type of technical support do you need to promote your business?

- website creation/web updating
- advertising
- social media marketing
- website integration with other systems
- increased press and presence

Students

What social media activities would you participate in?

- follow a business on social media (96%)
- help promote a business by liking or retweeting their posts (75%)
- post about a business with the #412Connect hashtag (33%)
- take photos and post reviews online (21%)

412Connect

a local organization-curated platform to connect Black-owned businesses and university students through social media and online discovery

412Connect Platform: Design Considerations & Questions

Considerations

- allow students to engage with businesses' social media
- facilitate students learning about businesses
- provide access to views for participating businesses
    - modeled as the expected number of unique impressions
- increase and incentivize user engagement
    - badges
    - institutional incentives

Questions

- users have preferences over business types
    {beauty, entertainment, food, shopping}
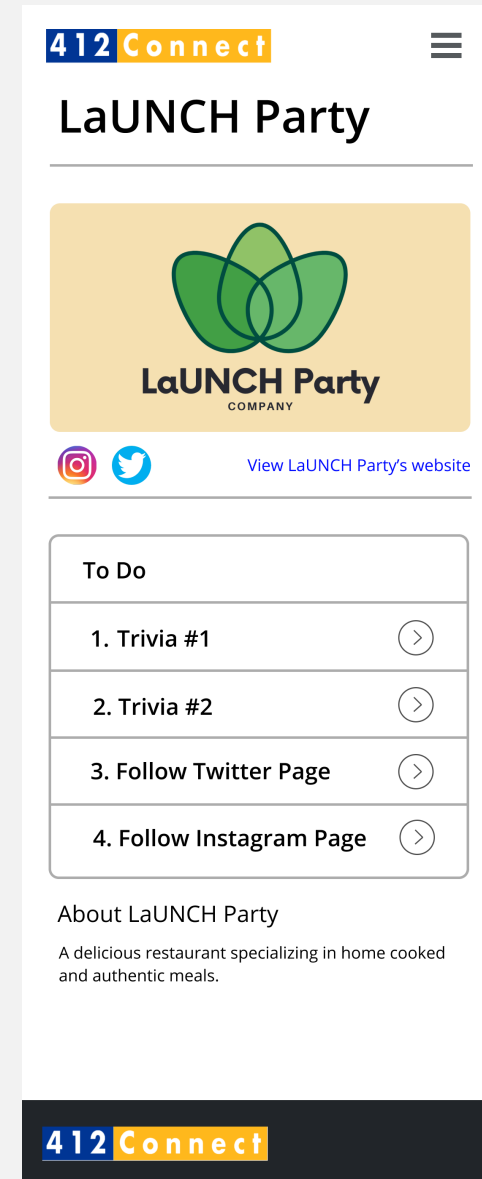   how much do a user's preferences matter in this setting?

412Connect Platform: Business Profile

trivia tasks

- questions written about a business

 - special menu items

  - history of the business

  - etc.

social media tasks

- directs users to follow a business on

  - Twitter

  - Instagram

  - Facebook

412Connect Platform: User Dashboard

- badges with current progress representing the two types of tasks
    - community explorer (trivia)
    - social amplifier (social media)

- business display, suggesting businesses for users one at a time
    - clicking on the display leads you to the business profile
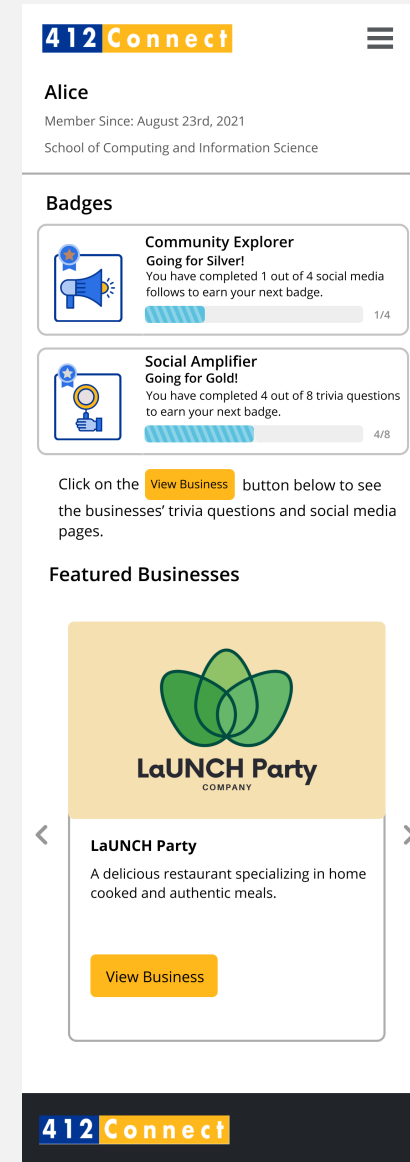
412Connect Platform: Display Order

Display Algorithm

- dictates the order in which businesses are presented to a user
- the probability of a user interacting with a business decreases exponentially with display order placement
- maintains the sum of expected engagement from all users as a running total for each business
- when a new user signs up, chooses the display order which keeps the totals of expected engagement closest together

Understanding the Impact of Preferences

- all users input their preferences for business types at sign-up

    subset of {food, entertainment, shopping, beauty}

- each user is randomly assigned one of two types with equal probability

    - *does not respect preferences*

        follows the display algorithm

    - *respects preferences*

        follows the display algorithm with the additional constraint that all in-preference businesses must be displayed before those which are out-of-preference

412Connect Platform: Badge System

- models badges as refreshing user motivation [13]

- results in non-linear badge thresholds
  - the work required to get the next badge increases with each badge obtained
  - the maximum amount of work required to get another badge is bounded

- the marginal increase in expected number of clicks decreases with each badge added

- linked to University of Pittsburgh Outside the Classroom Curriculum (OCC) credit

Bronze Community Explorer Badge

Silver Community Explorer Badge

[13] Lisa Facey-Shaw, Marcus Specht, Peter Van Rosmalen, Dirk Brner, and Jeanette Bartley-Bryan. 2017. Educational functions and design of badge systems: A conceptual literature review.

Curator Model – Recruiting Black-Owned Businesses

- universities have often used community engagement as a way to be "entrepreneurial in their search for revenue sources" and to fulfill external demands for campus-community involvement [39]
- **this can leave communities feeling harmed by university efforts**

  projects replicate what is already going on in the community

  funds go to disconnected university projects instead of ongoing community efforts with deep roots

- there already exist community organizations working in Pittsburgh, specifically with either minority-owned or Black-owned businesses
- we involve these organizations in the development of our platform, and they also work with us in bringing Black-owned businesses to the platform
- we call this curation, and it is a way for us to both acknowledge an organization's existing presence and to work together to elevate their work

[39] Dempsey, Sarah E. 2010. Critiquing community engagement.

Fall 2021 Launch and Future Plans

Fall 2021 Launch

- August 23rd – September 23rd
- 8 participating businesses
- 139 users

Future Plans

- validate our assumptions on how users engage with the platform with collected data
- iterate on the current badge and display models
- recruit and engage with other schools in Pittsburgh
- second launch in February 2022!

Thank You!

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Come join us at Grief to Action!

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BRIDGING STUDENTS & COMMUNITIES