UNIVERSITY OF PITTSBURGH innovation INSTITUTE

PittGrub

ID: 4444

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The amount of food waste generated by the U.S. is staggering, both expensive in economic cost and environmental side effects. Surplus food, which could be used to feed people facing food insecurity, is instead discarded and placed in landfills. Social catering in particular is an industry whose food and drink sales total 86 billion dollars, but whose end-consumer, the event host, lacks adequate information to make educated food purchasing decisions in the face of changing event scenarios. PittGrub is building the first analytics service to inform the food purchasing decisions of these consumers. Our current iteration is a food redistribution app, but unlike other food redistribution services in this sector, PittGrub will use the historical, event-specific data generated from past events to inform future event host purchasing decisions, eradicating the root cause of event-related food waste: over-ordering and mis-ordering.

Technology Description

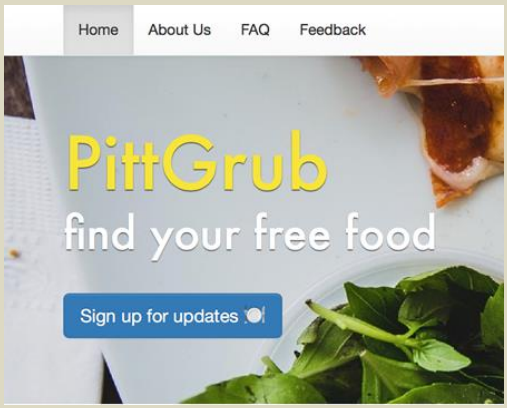
PittGrub is building the first analytics service to inform the food purchasing decisions of event hosts. This environment presents a challenge to normal food-waste prevention and diversion techniques because it is unpredictable (due to variables such as time-of-day, menu-type, and event-type) and time-sensitive (because the food has already been prepared). The first stage of our solution is a food redistribution app which uses smart notification to allow event hosts to alert our users of free leftover food. The smart-notification system, itself, is a developed, strong first step which has been simulation-tested in a peer-reviewed publication. It serves three purposes: first, it enables the scalability required to generate a unique, centralized data set of events with which to understand the dynamics of food-waste, second, it allows us to begin to handle waste in this industry through redistribution under inherent time-sensitive circumstances, and third it promotes social-good through prioritization of food-insecure users.

Advantages

- Preventative analytics for changing event scenarios will be made possible for the first time
- Smart notification system of the current iteration allows for:
  - Cost-effective, efficient redistribution in time-sensitive environment
  - Scalability: a necessity for large-scale data collection
  - Prioritized notification of food-insecure users for social good

Applications

- Prevention and diversion of food waste in environments that are unpredictable and time-sensitive. Hosts in these environments might include caterers, event planners, or ad-hoc hosts (e.g. one holding a temporary role as event organizer within a school, business, social club, or other institution)



Stage of Development

The redistribution mobile application, a key component of the first iteration, is in the final stages of beta development and is due for gated-release in the coming month.

IP Status

- Invention disclosure and copyright for first iteration (i.e. mobile application)
- Copyright on published details of Smart Notification System

Notable Mentions

Mentions in press:

- "New App Locates Hubs For Grub." The Pitt News. Remy Samuels
- "Dining Options at Pitt Please the Palate, Promote Sustainability Efforts." Pitt*wire*
  "Mobile Service to Connect Hungry Pitt Students to Free Food." Pittsburgh Magazine. Janine Faust

Related publications:

Mark Silvis, Anthony Sicilia, and Alexandros Labrinidis. 2018. PittGrub: A Frustration-Free System to Reduce Food Waste by Notifying Hungry College Students.

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