Incentivizing Participation in Peer-to-Peer Ridesharing Platform

Fei Fang
Carnegie Mellon University
School of Computer Science
Institute for Software Research
feifang@cmu.edu

Joint work with Hoon Oh, Yanhan Tang, Prof. Alexandre Jacquillat
Thanks to Weilong Wang, Chun Kai Ling

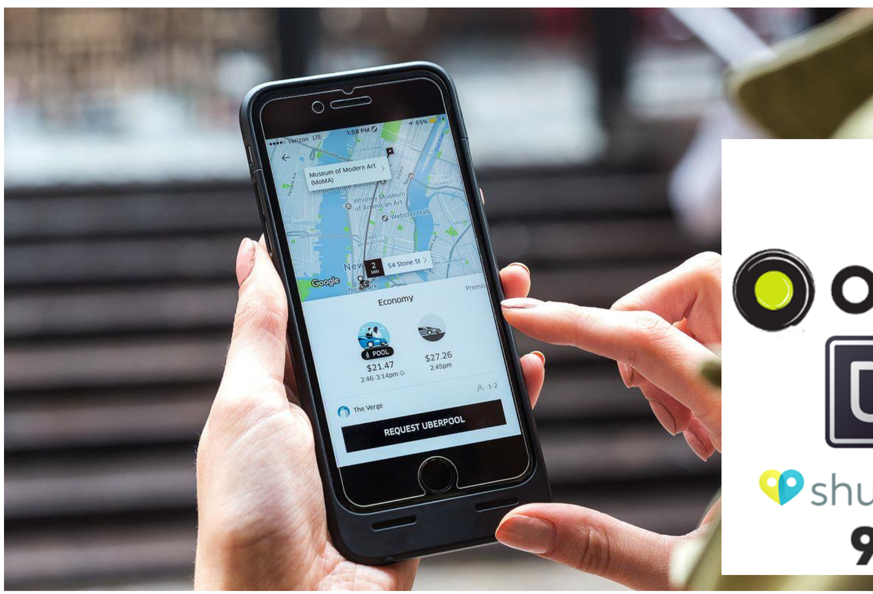
Mobility21 — A USDOT NATIONAL UNIVERSITY TRANSPORTATION CENTER

Traffic21 — A transportation research institute of Carnegie Mellon University

Smart City

SMART CITY
INDUSTRY
SECURITY
RETAIL
SOCIETY
HEALTHCARE
HOME
ENERGY
MOBILITY

Revolution in Mobility



HAIL O
EASY TAXI
lyft
Flywheel
OLA
GRABTAXI
Get Taxi
UBER
BLACKLANE LIMOUSINES
shuddle
Getaround
via
99TAXIS
Side.car

Mobility Challenge in Non-City Area

- Mobility Challenge in Suburban / Rural Area
  - Lack of public transportation
  - Lack access to essential needs if no private vehicle

- Commercial ridesharing platform cannot provide reliable service
  - Long waiting time
  - High cancellation rate
  - Expensive for daily commute

Community-Based Peer-to-Peer Ridesharing

- Community-Based Peer-to-Peer Ridesharing
  - Non-commercial platform
  - Identify carpooling opportunities
  - Community building

- Existing platforms are not satisfactory
  - High overhead / Not flexible / Hard-to-use
  - No up-to-date information / No immediate response
  - No community-specific service
  - Do not leverage latest advances in technology
  - Privacy / Security concerns

Existing Platforms: Share-A-Ride

The **Share-A-Ride** program is a free, computerized service that can match commuters who work in southeastern Pennsylvania with convenient transit services, potential car pool and vanpool groups, even walking and bicycling opportunities. Even employers can get on board by locating matches just for employees at a specific site(s).

By sharing the ride to work, commuters can save money and reduce the stress of getting to and from work. And you can breathe easy, knowing you are helping to keep the air cleaner, too!

Incentive for New Carpools

Gas prices don't have to get you down. New carpools formed through the Share-A-Ride program can qualify for up to $100 in Sunoco gas cards. Contact the TMA near your worksite to learn more and sign up!

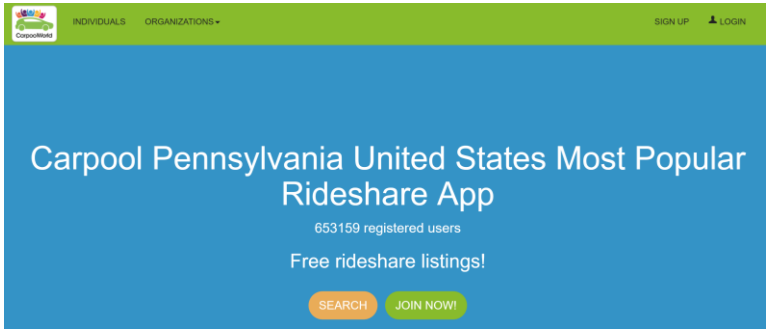
FAQs

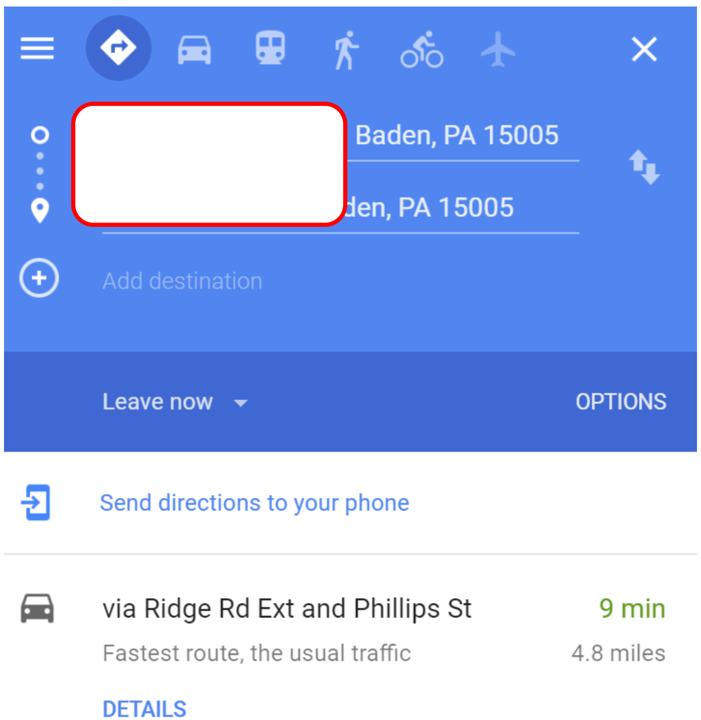
Check our Frequently Asked Questions for common questions about Share-A-Ride.

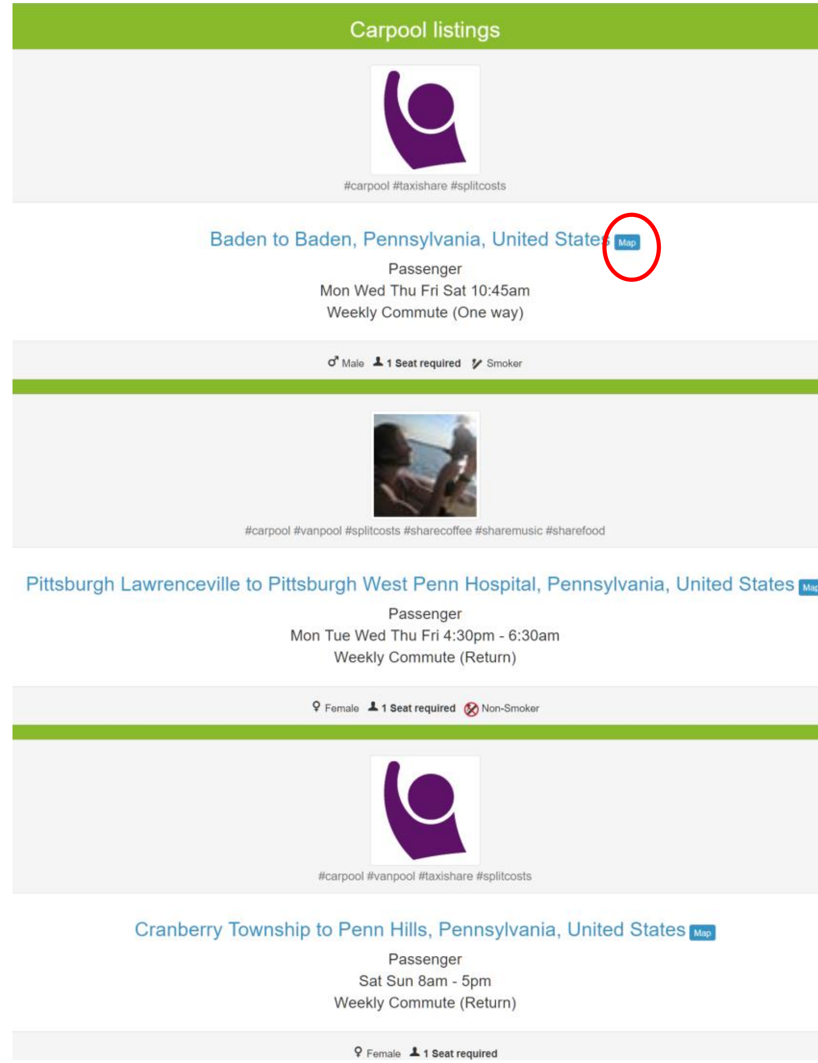
Sign Up Now!

Submit your Share-A-Ride application. You should hear about potential matches within 2 business days.

Existing Platforms: CarpoolWorld

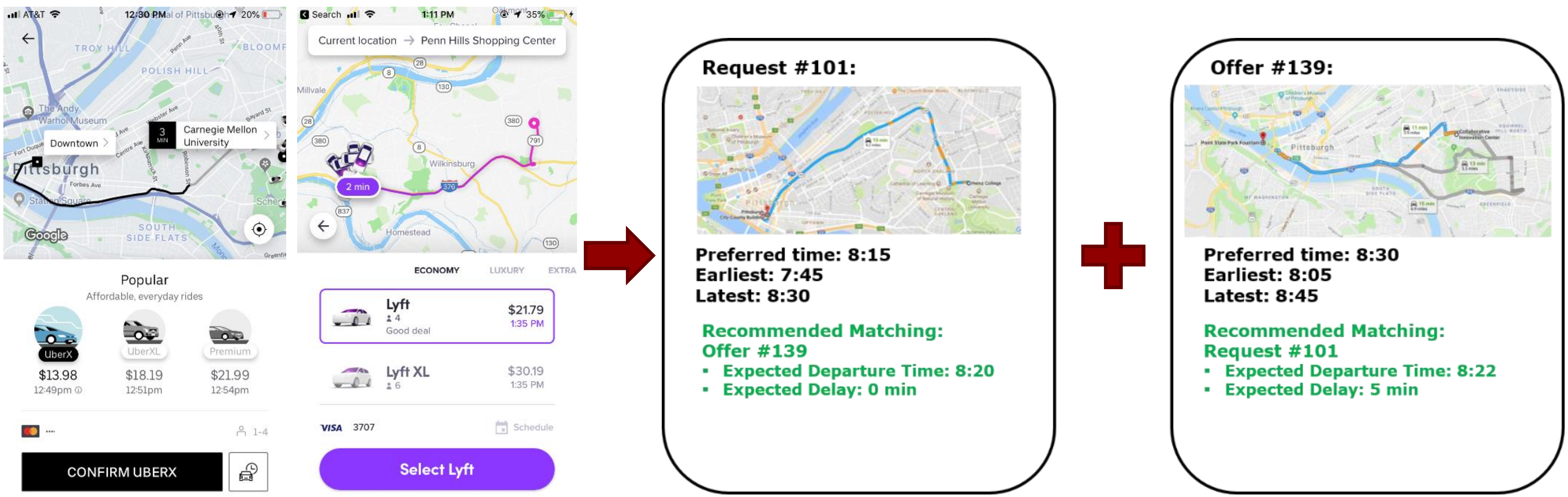






Community-Based Peer-to-Peer Ridesharing

- Bring Smart City Technology to Suburban / Rural Area
  - As easy-to-use as commercial ridesharing systems
  - Provide features specific for peer-to-peer ridesharing
  - Provide efficient matching



Community-Based Peer-to-Peer Ridesharing

- Bring Smart City Technology to Suburban / Rural Area
  - As easy-to-use as commercial systems
  - Provide features specific for peer-to-peer ridesharing
  - Provide efficient matching

- Design of website / smartphone application
- Design algorithms for matching and beyond
  - Efficiently match riders and drivers given their constraints and preferences
  - Ensure fairness and stability of matching
  - Incentivize participation through rewarding scheme

Outline

- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Summary
- (Optional) Pricing and Scheduling in Commercial Ridesharing Platform

Model and Notations

- V: Possible origin and destination locations
- $[T] = \{1 \ldots T\}$: Discrete time horizon

- $\mathrm{dist}(u, v)$: Travel time from u to v (following shortest or fastest path)

Model and Notations

- $\mathcal{R}$: Set of riders
- For each rider $r \in \mathcal{R}$
  - Self-reported
    - Origin o_r, Destination q_r, Time window $W_r = [\tau_r^e, \tau_r^l]$
      - Earliest departure time and latest arrival time acceptable
    - Preferred departure time $\tau_r^\star$, Maximum detour time Δ_r
  - Self-reported or estimated
    - Value of trip v_r
    - λ_r: Cost to complete the trip if not matched to any driver
    - $C_{tt'}^r$: Cost if matched to a driver, picked up at t and dropped off at t'
      - Travel cost + Detour cost + Deviation cost
      - Assumed to be linearly increasing w.r.t. detour time and deviation time

Model and Notations

- $\mathcal{D}$: Set of drivers
- For each driver $d \in \mathcal{R}$
  - Self-reported
    - Origin o_d, Destination q_d, Time window $W_d = [\tau_d^e, \tau_d^l]$
    - Preferred departure time $\tau_d^\star$, Maximum detour time Δ_d
    - Available seats k_d
  - Self-reported or estimated
    - Value of trip v_d
    - $C_{tt'}^d$: Cost if depart at t and arrives at t'
      - Travel cost + Detour cost + Deviation cost
      - Assumed to be linearly increasing w.r.t. detour time and deviation time

Outline

- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Summary
- (Optional) Pricing and Scheduling in Commercial Ridesharing Platform

Optimization Problem

- Simplest optimization objective: Minimize total cost
  - Let c_{dS} denote the minimum total cost of driver d and a subset of riders S when d is matched to S
  - Given a matching π, denote the set of riders picked up by driver d as $S^\pi(d)$

$$\min_{\pi\in\Pi} \sum_{d\in\mathcal{D}} c_{dS^\pi(d)} + \sum_{r\in\mathcal{R}:r\notin\cup_{d'\in\mathcal{D}}S^\pi(d')} \lambda_r$$

- How to find the matching to minimize total cost while satisfying the constraints of all participants?

Two-Stage Algorithm to Minimize Total Cost

- Two-Stage Algorithm
  - Stage 1: Compute c_{dS} for all feasible $d - S$ pairs
    - Find all feasible $d - S$ pairs (driver and subset of riders pairs) and for each feasible $d - S$ pair, find the optimal schedule that can lead to the minimum total cost of d and all riders in S.
  - Stage 2: Find the best matching
    - Given the computed c_{dS} for all the feasible $d - S$ pairs, match each driver with one subset of riders

Stage 1: Compute c_{ds} for all feasible $d - S$ pairs

- Use the RTV-graph (Rider-Trip-Vehicle) framework [Alonso-Mora et al, 2017] to enumerate feasible $d - S$ pairs and compute c_{ds} incrementally
  - Key idea: $d - S$ is feasible only if $d - S'$ is feasible, $\forall S' \subset S$ and $|S'| = |S| - 1$

RTV-Framework [Alonso-Mora et al, 2017]

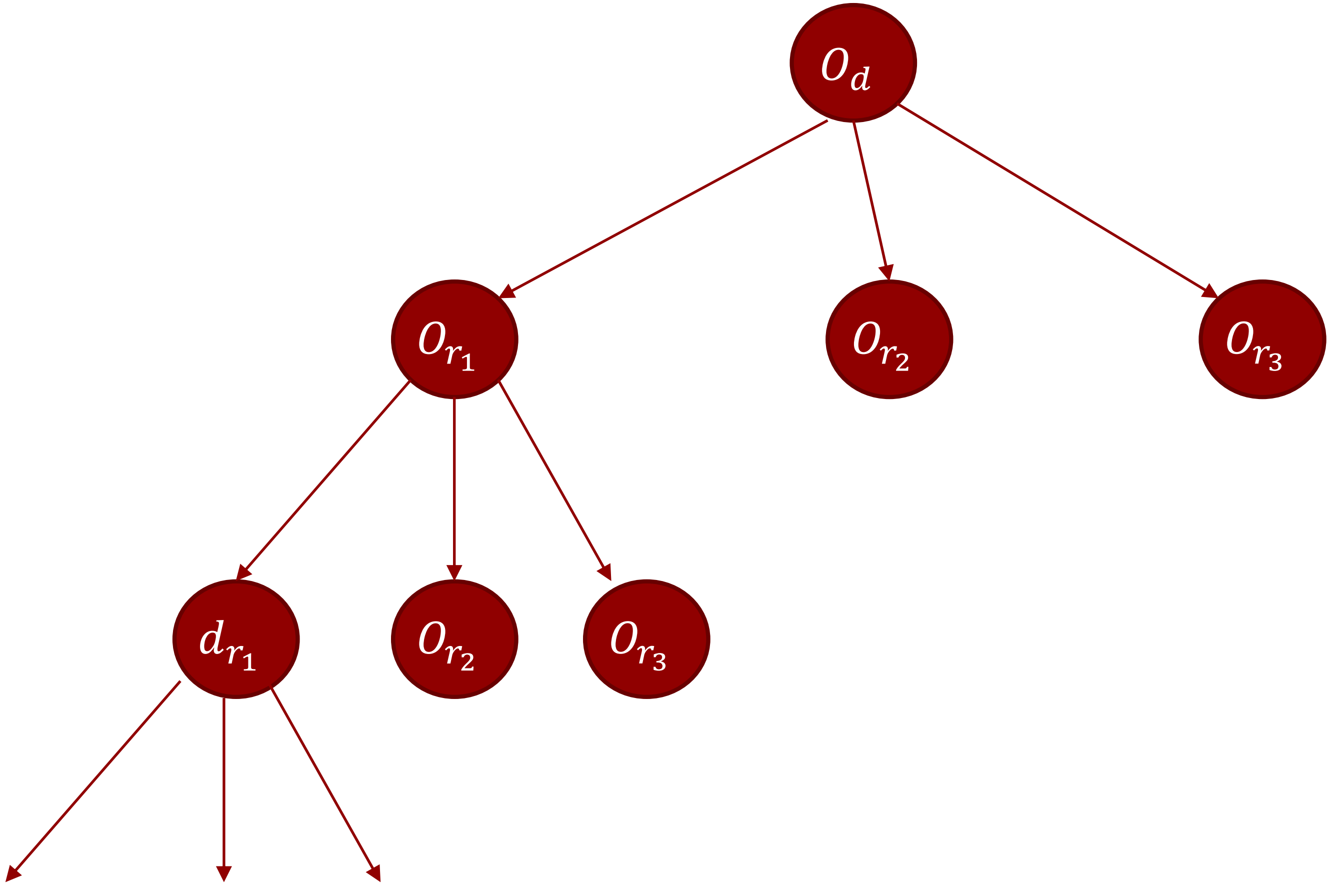
For each driver d
    Let $\mathcal{S}_i$ denote the set of subsets of riders with size i that are "compatible" with driver d. Initialize $\mathcal{S}_i$ as empty sets.
    For $i = 1..|\mathcal{R}|$
        Enumerate possibly feasible subsets of size i given $\mathcal{S}_{i-1}$
        For each possibly feasible subset S, check feasibility and compute c_{ds} and optimal schedule. Add to $\mathcal{S}_i$ if S is indeed feasible.

Stage 1: Compute c_{ds} for all feasible $d - S$ pairs

- Check feasibility and compute c_{ds} for a given $d - S$ pair
- Novel contribution: Find the best sequence of waypoints through tree search, enhanced by pruning, dynamic programming, and imitation
  - Pruning: Prune the subtree if lower bound of cost in the subtree is higher than best solution found so far
  - At leaf node: Dynamic Programming
  - Further improvement: Get a reasonably good solution by imitating / learning from the best sequence of $d - S'$ where $S' \subset S$

Stage 1: Compute c_{dS} for all feasible $d - S$ pairs

- Example: d, r_1, r_2, r_3



Stage 2: Find the best matching

- Integer linear programming
  - Similar to [Alonso-Mora et al, 2017]

$$
\begin{aligned}
\min \quad & \sum_{d \in \mathcal{D}} \sum_{S \in \mathcal{S}} c_{dS} x_{dS} + \sum_{r \in \mathcal{R}} \lambda_r y_r & \\
s.t. \quad & \sum_{d \in \mathcal{D}} \sum_{S \in \Gamma_r} x_{dS} + y_r = 1, & \forall r \in \mathcal{R} \\
& \sum_{S \in \mathcal{S}} x_{dS} = 1 & \forall d \in \mathcal{D} \\
& x_{dS} = 0 & \forall (d, S) \text{ not feasible} \\
& x_{dS} \in \{0, 1\} & \forall d \in \mathcal{D}, S \in \mathcal{S} \\
& y_r \in \{0, 1\} & \forall r \in \mathcal{R}
\end{aligned}
$$

Is Cost Minimization Enough?

- Limitation
  - Does not explicit reason about rationality of the drivers
  - Why do drivers participate even without payment?
    - Help reduce the total cost of the society
    - Feel good by helping others
  - When would the driver be unhappy?
    - He suffers too much additional cost due to deviation and detour, while his "contribution" to the whole system or to the riders is not so significant

Utility Model

- Rider utility
  - $U_r = v_r - C^r_{tt'}$ if matched
  - $U_r = v_r - \lambda_r$ if not matched

- Driver utility
  - $U_d = v_d - C^d_{tt'}$
  - Altruistic factor ρ_d
  - Altruistic utility (perceived utility) $\widetilde{U}_d = U_d + \rho_d \sum_{r \in S(d)} U_r$

- Individual rationality: $U_r \geq 0, \widetilde{U}_d \geq 0$

Refined Optimization Problem

$$\min_{\pi \in \Pi} \sum_{d \in \mathcal{D}} c_{d S^{\pi}(d)} + \sum_{r \in \mathcal{R}: r \notin \cup_{d' \in \mathcal{D}} S^{\pi}(d')} \lambda_r$$

s.t. $$U_r \geq 0$$

$$\widetilde{U}_d \geq 0$$

Other existing constraints

- Original optimization problem is equivalent to the case with $\rho_d = +\infty$

Refined Optimization Problem

- Algorithms for the revised optimization problem are almost the same, except that in the leave node of tree search (for computing c_{ds}), we need to solve an ILP if the solution provided by the dynamic programming does not ensure IR for the driver

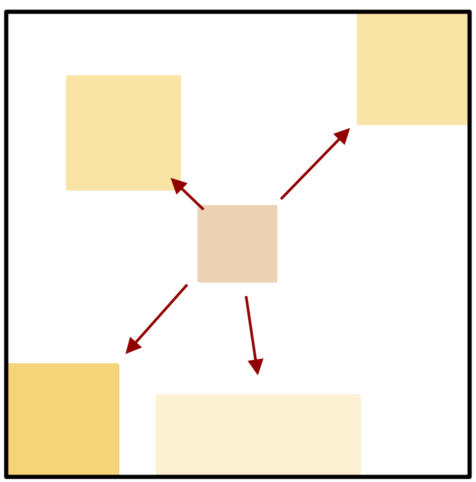
Refined Optimization Problem

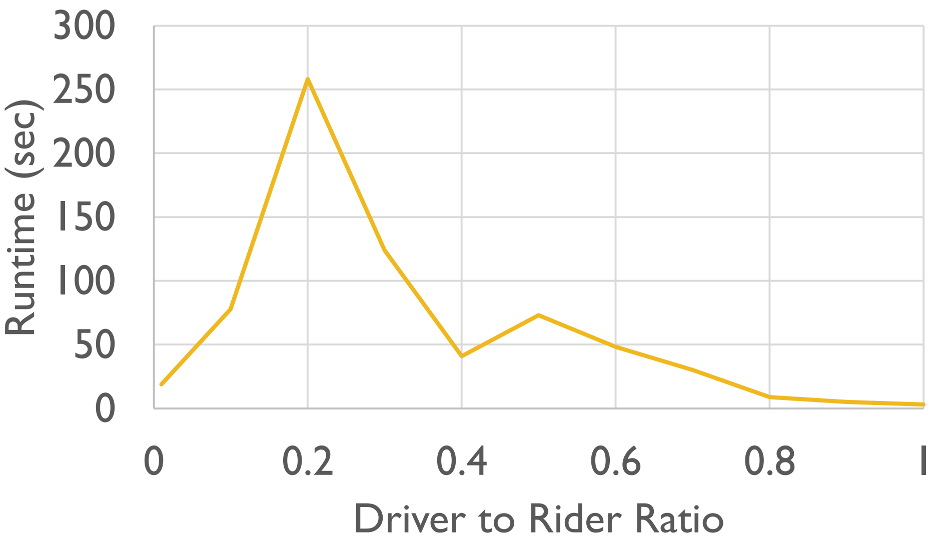
$$
\begin{aligned}
\min \quad & \sum_{v \in \{o_d, d_d\}} \sum_{t \in T(v)} c_{vt} z_{vt} + \sum_{t \in T(o_d)} \sum_{t' \in T(d_d)} c_{dtt'} g_{dtt'} \\
& + (1 + \rho'_d) \cdot \left(\sum_{v \in \sigma \setminus d} \sum_{t \in T(v)} c_{vt} z_{vt} + \sum_{r \in \mathcal{R}} \sum_{t \in T(o_r)} \sum_{t' \in T(d_r)} c_{rtt'} g_{rtt'} \right) \\
\text{s.t.} \quad & \sum_{t \in T(v)} z_{vt} = 1 && \forall v \in \sigma \\
& g_{rtt'} \leq z_{o_r t} && \forall r \in S \cup \{d\}, t \in T(o_r), t' \in T(d_r) \\
& g_{rtt'} \leq z_{d_r t} && \forall r \in S \cup \{d\}, t \in T(o_r), t' \in T(d_r) \\
& \sum_{t \in T(o_r)} \sum_{t' \in T(d_r)} g_{rtt'} = 1 && \forall r \in S \cup \{d\} \\
& z_{vt} \leq \sum_{q \in [t_\sigma^+, \tau^l_{\mathtt{next}_\sigma(v)}]} z_{\mathtt{next}_\sigma(v) q} && \forall v \in \sigma, t \in T(v) \\
& \boxed{v_r - \sum_{t \in T(o_r)} c_{o_r t} z_{o_r t} - \sum_{t \in T(o_r)} \sum_{t' \in T(d_r)} c_{rtt'} g_{rtt'} \geq v_r - \lambda_r} \quad U_r \geq 0 && \forall r \in S \\
& \boxed{\begin{aligned} & \rho_d \cdot \sum_{r \in S} \left(v_r - \sum_{t \in T(o_r)} c_{o_r t} z_{o_r t} - \sum_{t \in T(o_r)} \sum_{t' \in T(d_r)} c_{rtt'} g_{rtt'} \right) \\ & + v_d - \sum_{t \in T(o_d)} c_{o_d t} z_{o_d t} - \sum_{t \in T(o_d)} \sum_{t' \in T(d_d)} c_{dtt'} g_{dtt'} \geq v_d - c^d_{\text{det}} \cdot \mathtt{dist}_d \end{aligned}} \quad \widetilde{U}_d \geq 0 \\
& g_{rtt'} = 0 && \forall r \in S \cup \{d\}, \forall t \in T(o_r), \forall t' \in [t + \Delta_r + \mathtt{dist}_r, \tau^l_r] \\
& z_{vt}, g_{rtt'} \in \{0, 1\}
\end{aligned}
$$

Simulation Results - Scalability

- Simulated instance reflecting daily commute in a neighborhood. $k_d = 4$
- Highest runtime when the ratio is 20% (1:4 driver to rider ratio, i.e., when cars can be fully utilized)

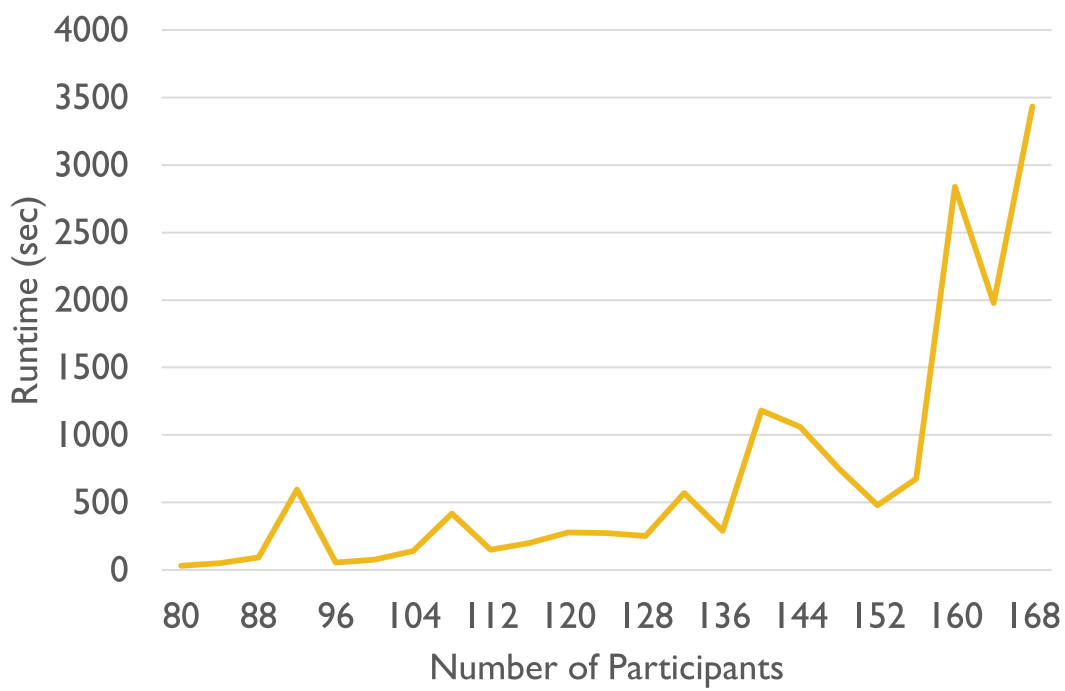
Minimize Total Cost subject to IR Constraint on Perceived Utility





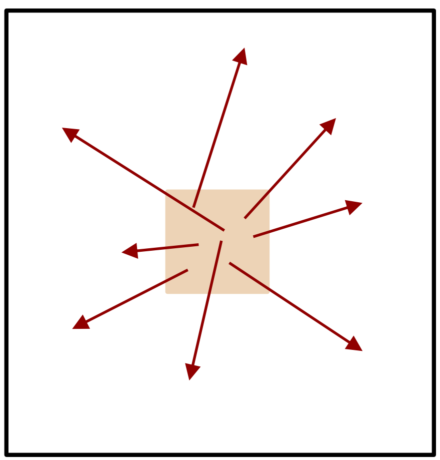
Simulation Results - Scalability

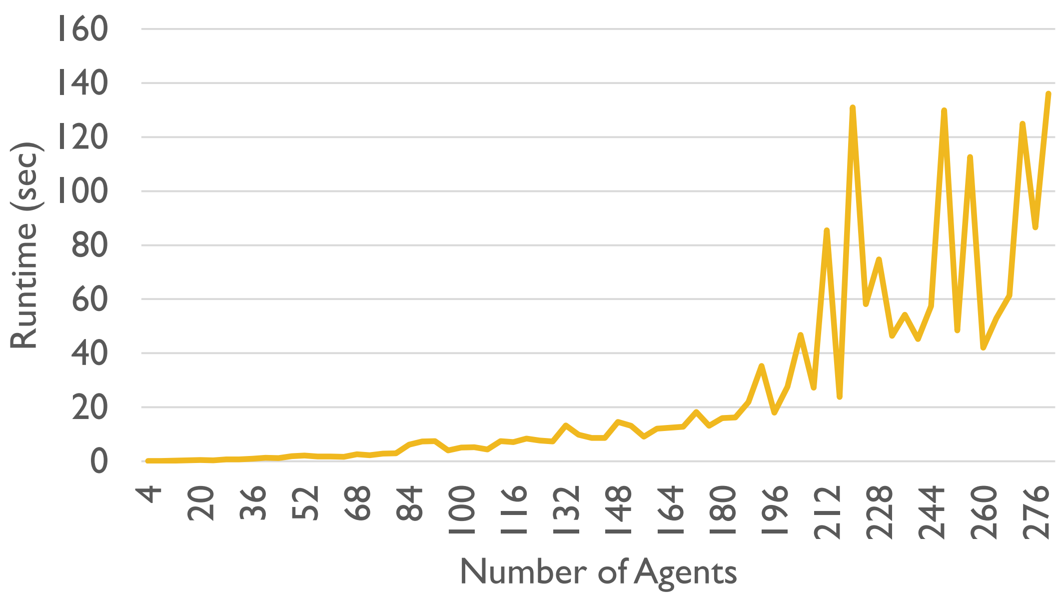
- Fix the driver-rider ration to be 25% (1:3)
- The algorithm can scale up to 160 participants (40 drivers 120 riders) within 1 hour



Simulation Results - Scalability

- Simulated instance reflecting non-rush hour commute in a neighborhood: random destination
- $k_d = 4$, driver-rider ration is 25% (1:3)
- Can handle problems with much larger scale





Alternative Objective: Maximize Perceived Social Welfare

- Minimizing total cost is equivalent to maximizing total utility (social welfare)

$$\min_{\pi\in\Pi}\sum_{d\in\mathcal{D}} c_{dS^{\pi}(d)} + \sum_{r\in\mathcal{R}:r\notin\cup_{d'\in\mathcal{D}}S^{\pi}(d')} \lambda_r \iff \min_{\pi\in\Pi}\sum_{d\in\mathcal{D}} U_d + \sum_{r\in\mathcal{R}} U_r$$

- Alternative objective: Maximize total altruistic utility (altruistic social welfare)

$$\min_{\pi\in\Pi}\sum_{d\in\mathcal{D}} \widetilde{U}_d + \sum_{r\in\mathcal{R}} U_r$$

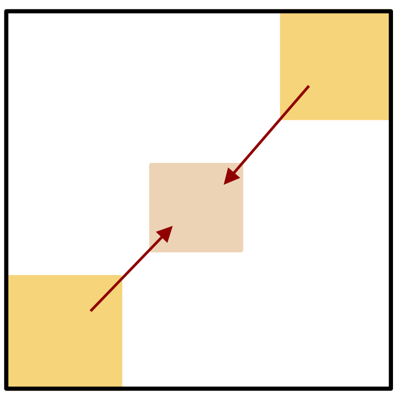
Similar algorithms can be applied

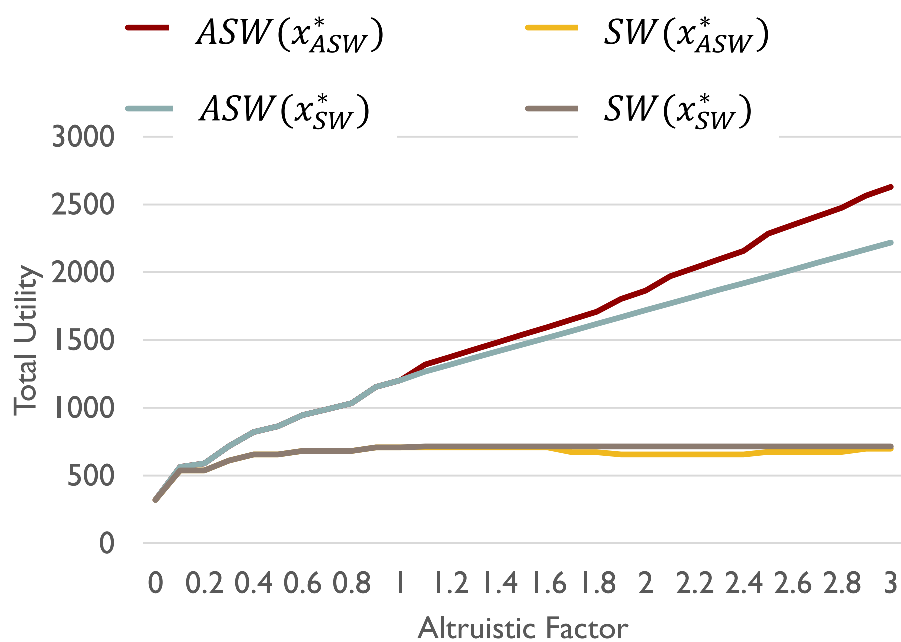
$$\Updownarrow$$

$$\min_{\pi\in\Pi}\sum_{d\in\mathcal{D}}\sum_{r\in S^{\pi}(d)}(1+\rho_d)C^{r}_{t_r^{\pi}\underline{t_r^{\pi}}} + \sum_{d\in\mathcal{D}} C^{d}_{t_d^{\pi}\underline{t_d^{\pi}}} + \sum_{j\in\mathcal{R}:j\notin\cup_{i\in\mathcal{D}}S^{\pi}(i)} \lambda_j - \sum_{d\in\mathcal{D}}\sum_{r\in S^{\pi}(d)} \rho_d \upsilon_r$$

Simulation Results – Social Welfare vs Altruistic Social Welfare

- 5 drivers, 20 riders
- Almost the same when ρ_d is low
- Differences can be as high as 16% when ρ_d is high





Outline

- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Summary
- (Optional) Pricing and Scheduling in Commercial Ridesharing Platform

Fairness in Matching

- Rider who is slightly "dominated" will never get a ride
- If frequent or repeated ride requests, the slightly dominated rider deserve some probability of getting matched (for regularly repeated requests, may consider rematching every season etc)
- Fairness: Ensure that each participant i is matched with a minimum probability θ_i as long as there is a feasible match. For now, let $\theta_i = \theta, \forall i$

Fairness in Matching

- Find the optimal randomized matching given c_{ds}
  - $M^l, l = 1 \dots \eta$ are feasible matchings
  - $m_i^l \in \{0,1\}$: whether or not participant i is matched in M^l
  - Challenge: exponential number of feasible matchings

$$
\begin{aligned}
\min_{p} \quad & \sum_{\ell \in [\eta]} Cost(M^\ell) p^\ell & \\
\text{s.t.} \quad & \sum_{\ell \in [\eta]} p^\ell = 1 & \\
& \sum_{\ell \in [\eta]} m_i^\ell p^\ell \geq \theta_i & \forall i \in \mathcal{D} \cup \mathcal{R} \\
& p^\ell \geq 0 & \forall \ell \in [\eta]
\end{aligned}
$$

Fairness in Matching

- Find the optimal randomized matching through constraint generation for the dual

$$\begin{aligned} \min_{p} \quad & \sum_{\ell \in [\eta]} Cost(M^\ell) p^\ell \\ \text{s.t.} \quad & \sum_{\ell \in [\eta]} p^\ell = 1 \\ & \sum_{\ell \in [\eta]} m_i^\ell p^\ell \geq \theta_i \\ & p^\ell \geq 0 \end{aligned}$$

$\Rightarrow$

$$\begin{aligned} \max_{w,\rho} \quad & \sum_{i \in \mathcal{D} \cup \mathcal{R}} \theta_i w_i + \rho \\ \text{s.t.} \quad & \sum_{i \in \mathcal{D} \cup \mathcal{R}} m_i^\ell w_i + \rho \leq Cost(M^\ell) & \forall \ell \in [\eta] \\ & w_i \geq 0 & \forall i \in \mathcal{D} \cup \mathcal{R} \end{aligned}$$

Slave problem: Find the most violated constraint that is not considered yet

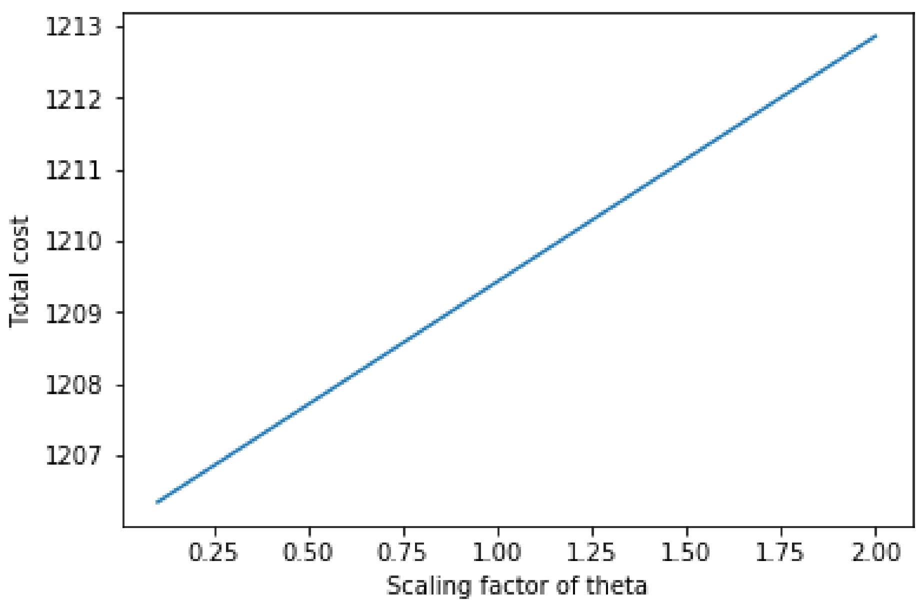
$$\max_{l} \sum_{i \in \mathcal{D} \cup \mathcal{R}} m_i^l w_i^* + \rho^* - Cost(M^l)$$

Equivalent to solve the original matching problem with edge weight adjusted from c_{ds} to $\bar{c}_{ds} = c_{ds} - \sum_{i \in \{d\} \cup s} w_i^*$

$$\min_{\pi \in \Pi} \sum_{d \in \mathcal{D}} \bar{c}_{ds^{\pi}(d)} + \sum_{r \in \mathcal{R} : r \notin \cup_{d' \in \mathcal{D}} s^{\pi}(d')} \lambda_r$$

Fairness in Matching

- Minimum cost increase linearly as θ increases when θ is small
- Can increase fairness without too much degradation in efficiency



Stability in Matching

- No subgroup has incentive to leave the system and operate on their own such that everyone in the subgroup get higher utility
- When subgroup has size 1, lead to constraints
  - $U_r \geq v_r - \lambda_r$
  - $\widetilde{U}_d \geq v_d - C^d_{\tau^\star_d, \tau^\star_d + \mathrm{dist}(o_d, q_d)}$
  - Stronger than the IR constraint $U_r \geq 0, \widetilde{U}_d \geq 0$
- Need additional constraints for subgroups with size larger than 1 (Ongoing work)
- Adding stability constraint will reduce system efficiency (total cost or social welfare)

Outline

- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Pricing and Scheduling in Commercial Ridesharing Platform
- Summary

Reward / Payment Scheme (Future Work)

- Further incentivize participation

- Approach 1: Scoring system to determine θ_i - minimum probability of getting matched

- Approach 2: External reward to ensure stability
  - E.g., coupons provided by community partners

- Approach 3: Suggest payment from rider to driver

Outline

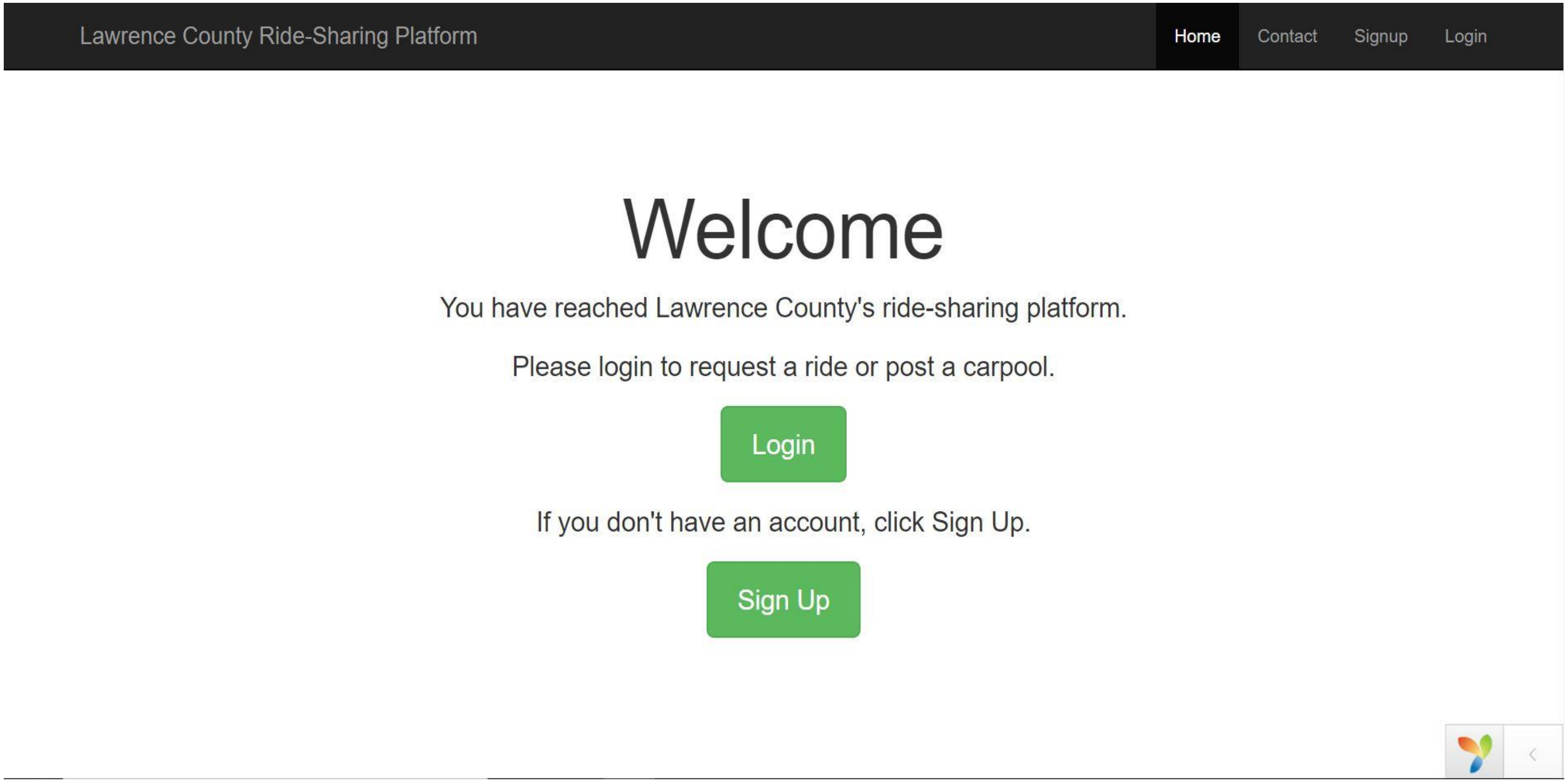
- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Summary
- (Optional) Pricing and Scheduling in Commercial Ridesharing Platform

Plan for Deployment

- In collaboration with
  - Lawrence County
  - Allegheny County Department of Human Service Office of Community Services
  - Hulton Arbors

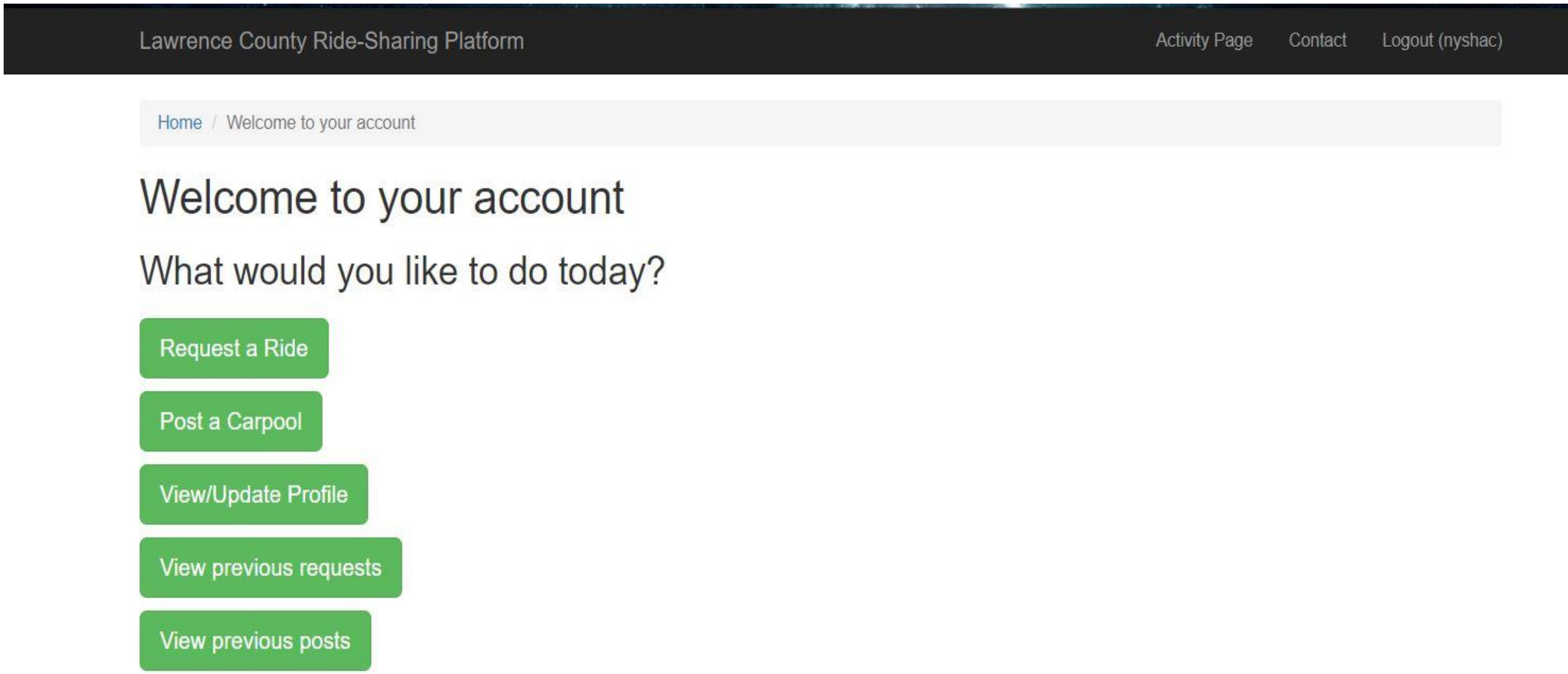
Lawrence County Peer-to-Peer Ride-Sharing Platform

- (Developed by Team Lead by Prof. Jacquillat)
- Landing Page of Website



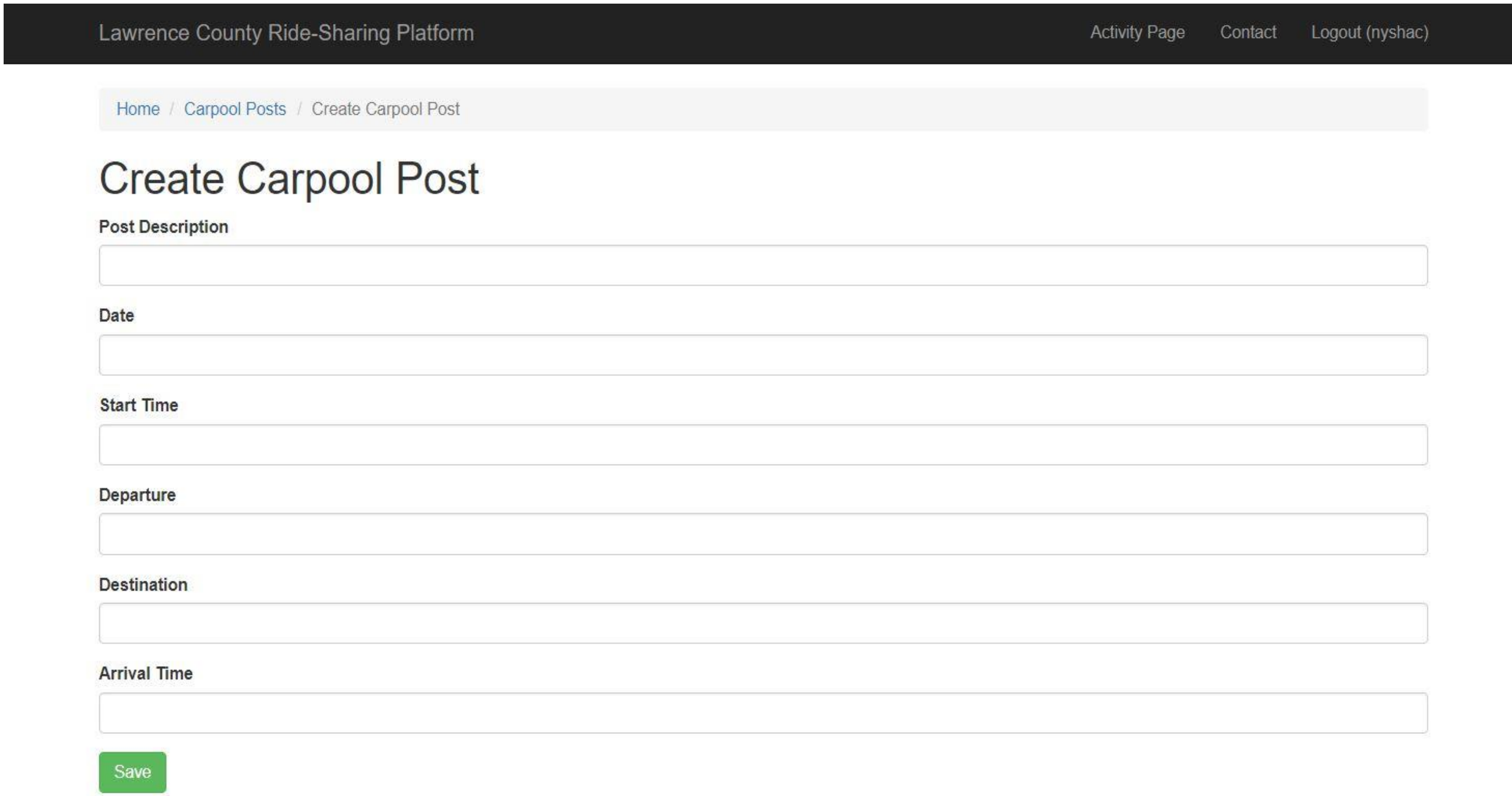
Lawrence County Peer-to-Peer Ride-Sharing Platform

- Activity Page (Landing Page after Logging in):



- Request a Ride Page

- Post a Carpool Page



Summary

- Peer-to-Peer Ridesharing Platform
  - Need to consider the utility model of the participants
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize participation through reward/payment scheme

Fei Fang
Carnegie Mellon University
feifang@cmu.edu

Mobility21
A USDOT NATIONAL UNIVERSITY TRANSPORTATION CENTER

Traffic21
A transportation research institute of Carnegie Mellon University

Backup Slides

Outline

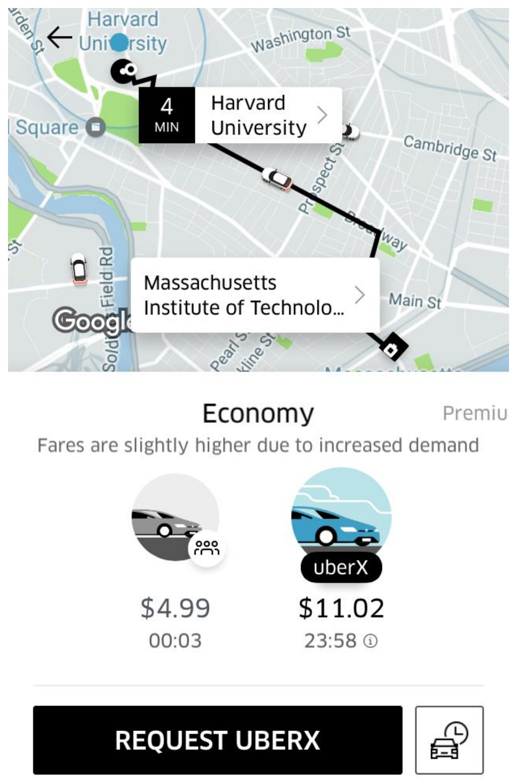
- Peer-to-Peer Ridesharing Platform
  - Model and Notations
  - Matching Riders and Drivers to Maximize System Efficiency
  - Tradeoff between Efficiency, Fairness, and Stability
  - Incentivize Participation through Reward/Payment Scheme
  - Deployment Plan
- Summary
- (Optional) Pricing and Scheduling in Commercial Ridesharing Platform

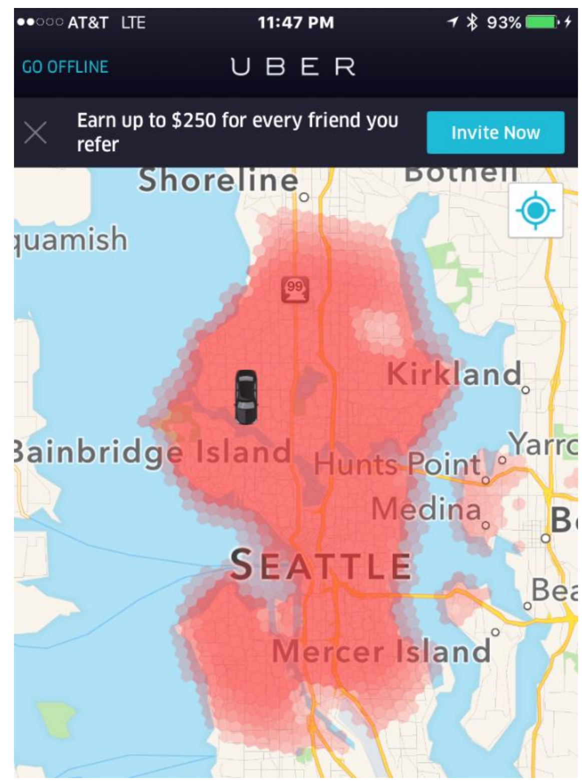
Community-Based Peer-to-Peer Ridesharing

	Commercial Ridesharing Platform	Community-Based Peer-to-Peer Ridesharing Platform
Goal	Maximize Revenue	Maximize Social Welfare / Total Cost Saving
Rider-to-Driver Payment	Yes	Not necessary
Drivers' departure and arrival	Almost not allowed	Yes
Rider's Flexibility	Not provided explicitly	Yes
Control over participants	Penalty / Fine	Reward

Commercial Ridesharing Platform

- Ensure efficiency of on-demand ridesharing through scheduling and pricing

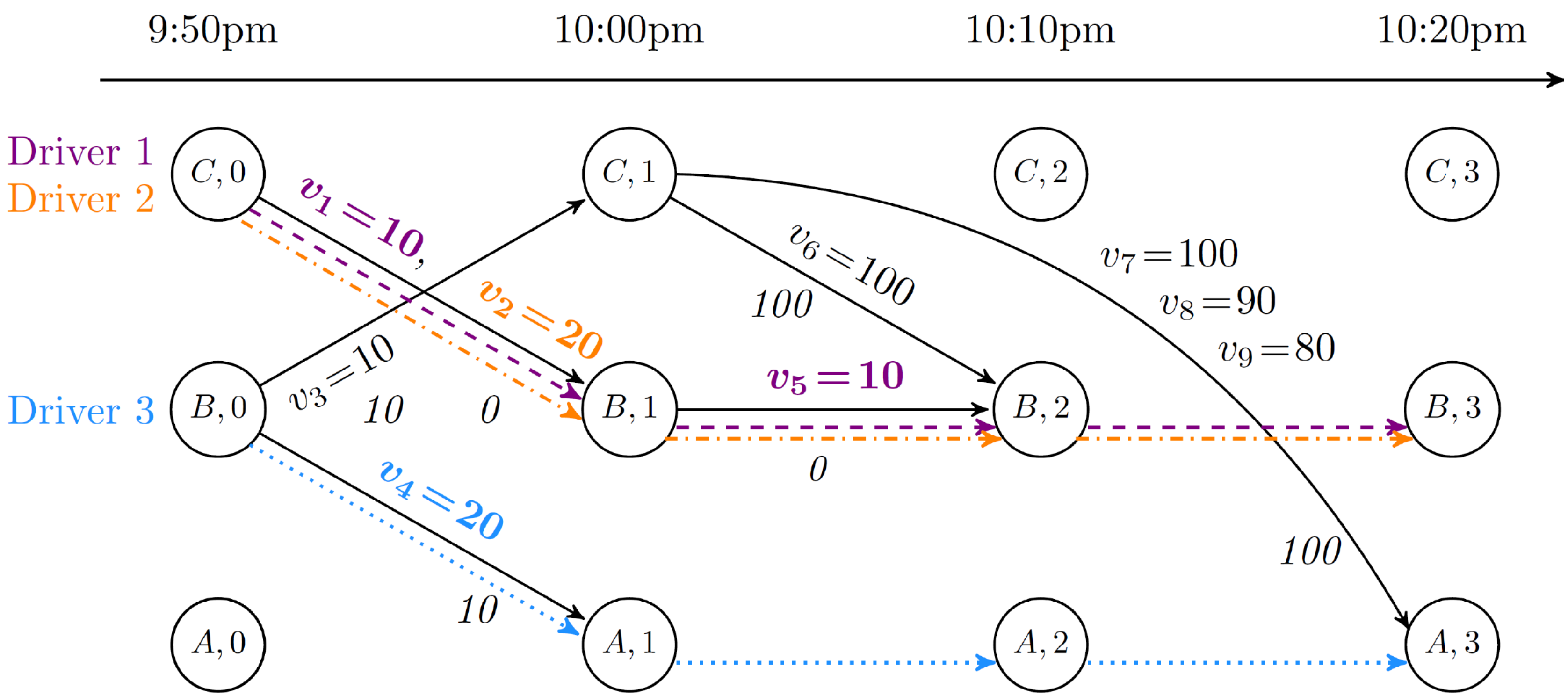




Spatial-Temporal Pricing

- Why current mechanism (naïve surge) does not work

Super
Bowl
Ends



Spatial-Temporal Pricing

- Model: Discrete time/location, Impatient riders, Anonymous origin-destination trip price

- One-shot assignment
  - Assignment plan: Decompose a min-cost flow
  - Pricing: Dual of flow LP
  - Form competitive equilibrium (CE)
    - Welfare optimal
    - Maximize total payment for each driver
    - Maximize utility for each rider
    - Envy free
    - All feasible driver payments in CE form a lattice

Spatial-Temporal Pricing

- However…Drivers can deviate and trigger recomputation!

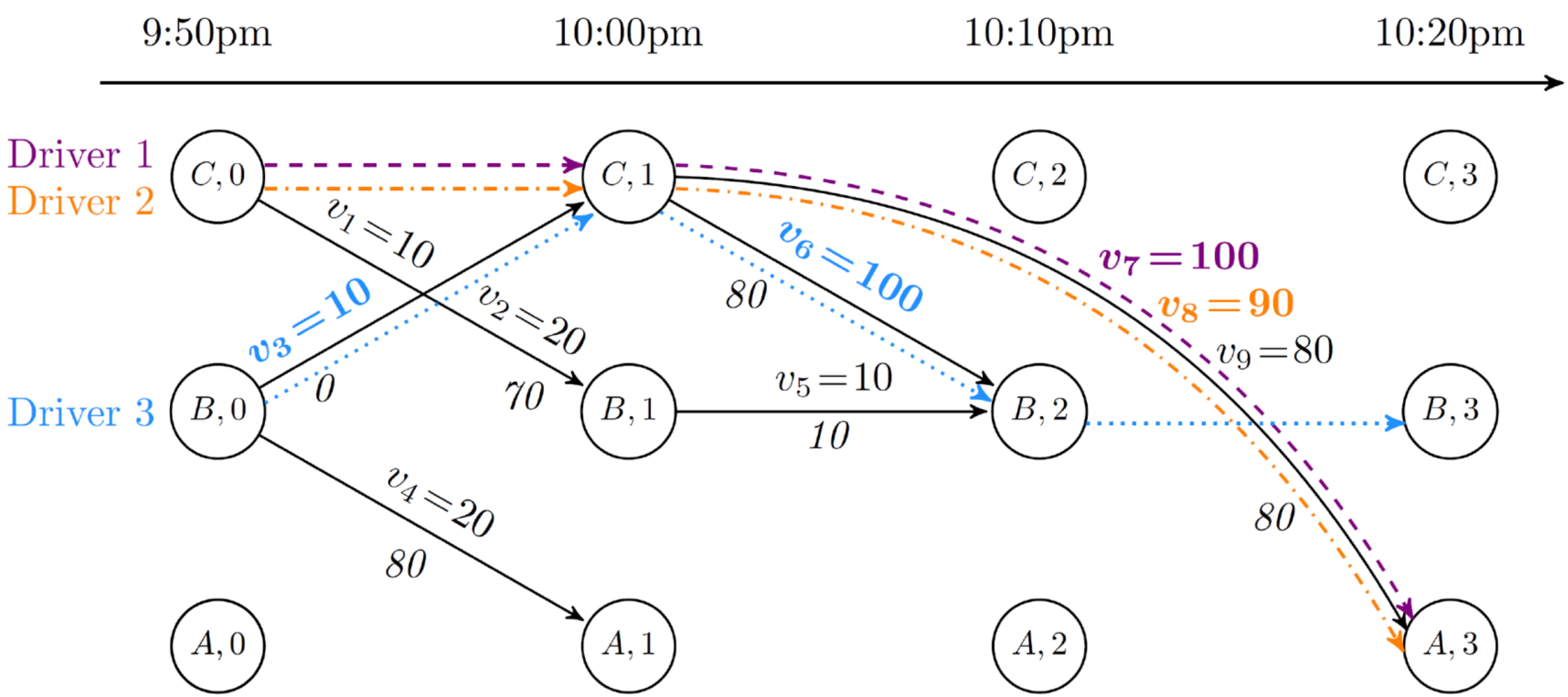
- Solution: Driver-Pessimal CE
  - Trip price = welfare gain difference

$$p_{a,b,t} = \Phi_{a,t} - \Phi_{b,t+dist(a,b)}$$
$$\Phi_{a,t} \triangleq W(D \cup \{(t,T,a)\},R) - W(D,R)$$

  - Incentive compatible subgame perfect equilibrium
  - No driver want to deviate from assigned action!

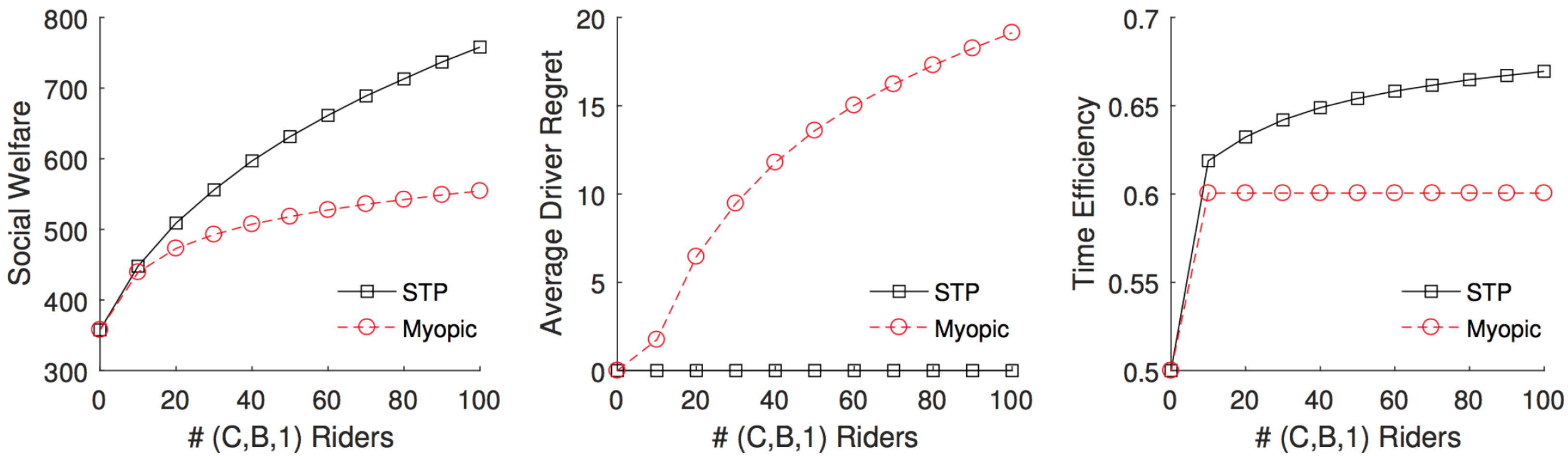
Spatial-Temporal Pricing

- Assignment and trip price under Spatio-Temporal Pricing

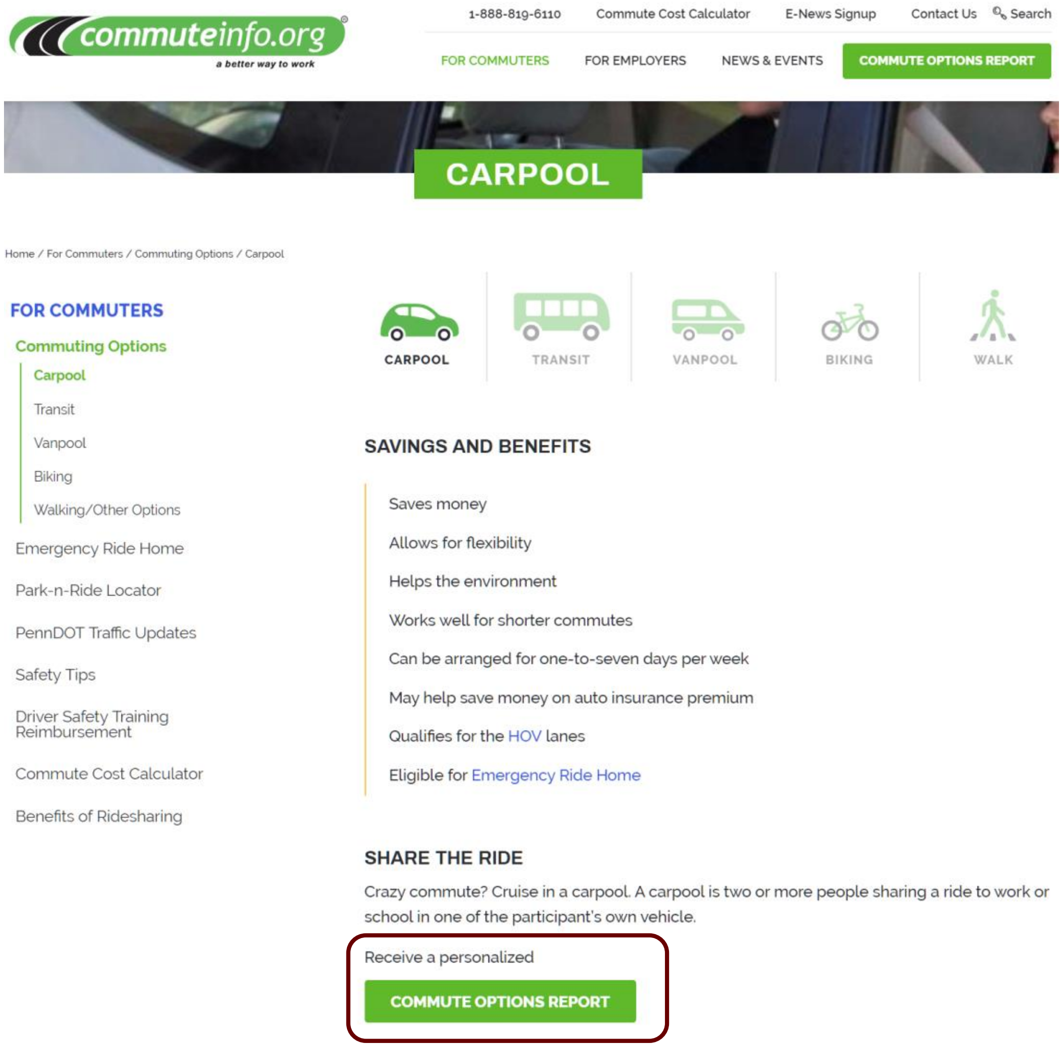


Spatial-Temporal Pricing

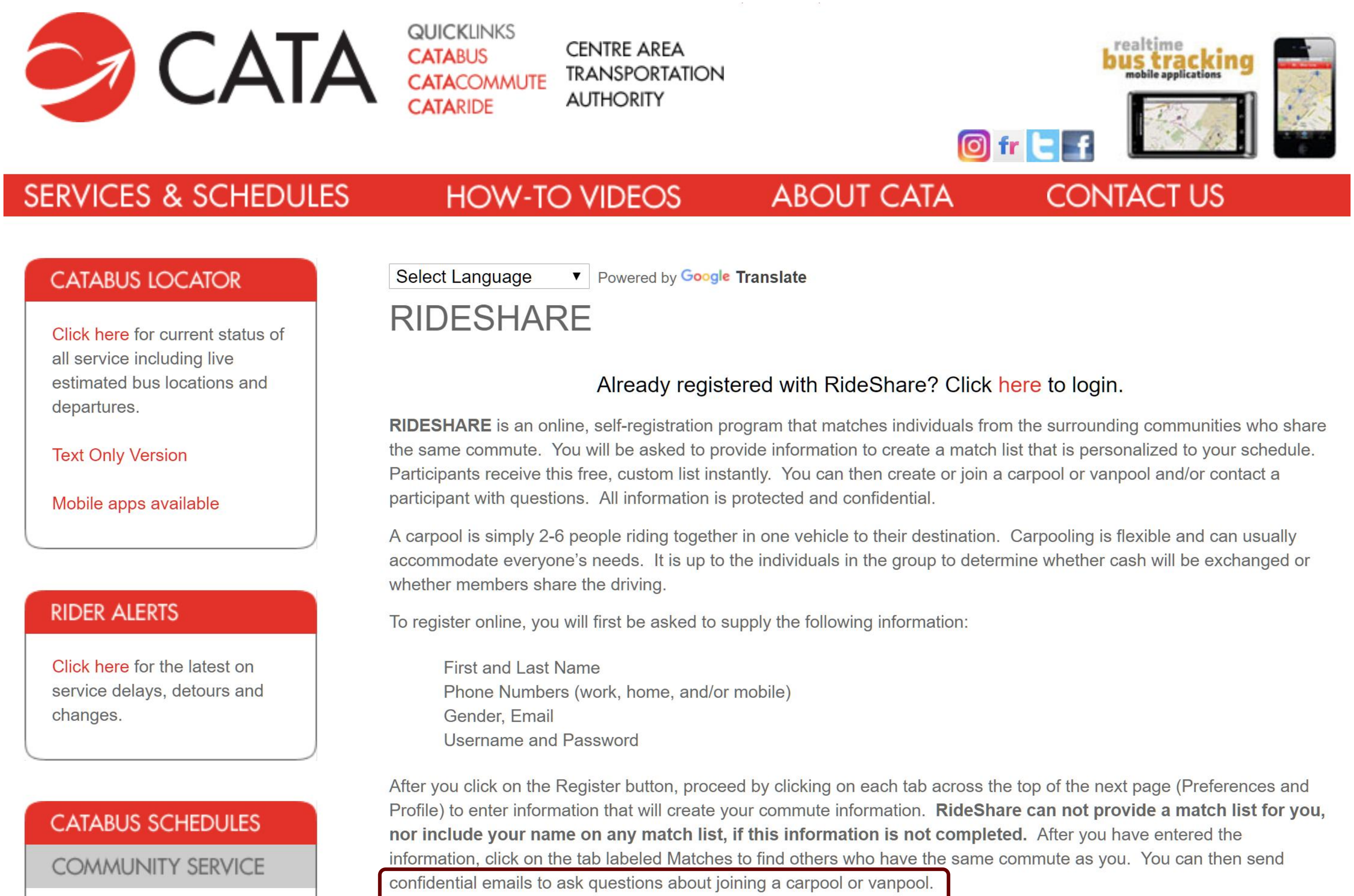
- SPT vs Naïve surge



Existing Platforms: CommuteInfo



Existing Platforms: CATARIDE


CATA

QUICKLINKS
CATABUS
CATACOMMUTE
CATARIDE

CENTRE AREA
TRANSPORTATION
AUTHORITY

realtime bus tracking mobile applications

SERVICES & SCHEDULES HOW-TO VIDEOS ABOUT CATA CONTACT US

CATABUS LOCATOR

Click here for current status of all service including live estimated bus locations and departures.

Text Only Version

Mobile apps available

RIDER ALERTS

Click here for the latest on service delays, detours and changes.

CATABUS SCHEDULES

COMMUNITY SERVICE

Select Language ▼ Powered by Google Translate

RIDESHARE

Already registered with RideShare? Click here to login.

RIDESHARE is an online, self-registration program that matches individuals from the surrounding communities who share the same commute. You will be asked to provide information to create a match list that is personalized to your schedule. Participants receive this free, custom list instantly. You can then create or join a carpool or vanpool and/or contact a participant with questions. All information is protected and confidential.

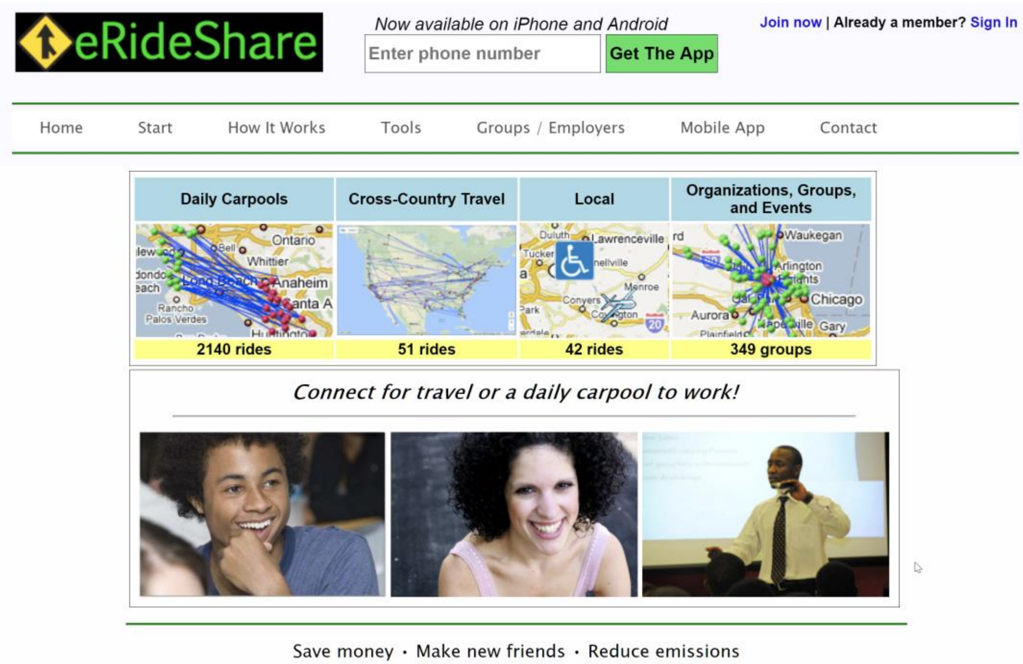
A carpool is simply 2-6 people riding together in one vehicle to their destination. Carpooling is flexible and can usually accommodate everyone's needs. It is up to the individuals in the group to determine whether cash will be exchanged or whether members share the driving.

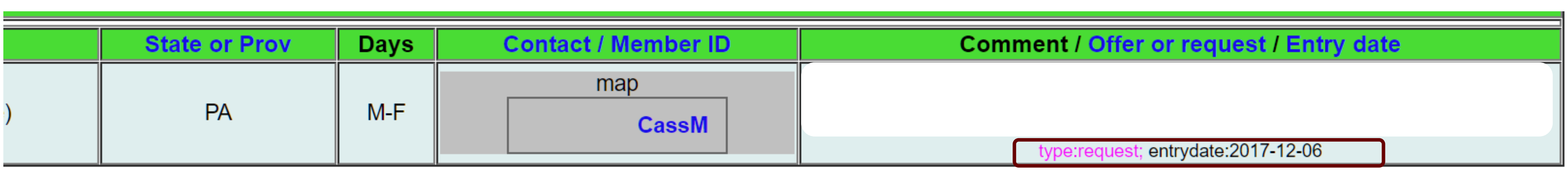
To register online, you will first be asked to supply the following information:

First and Last Name
Phone Numbers (work, home, and/or mobile)
Gender, Email
Username and Password

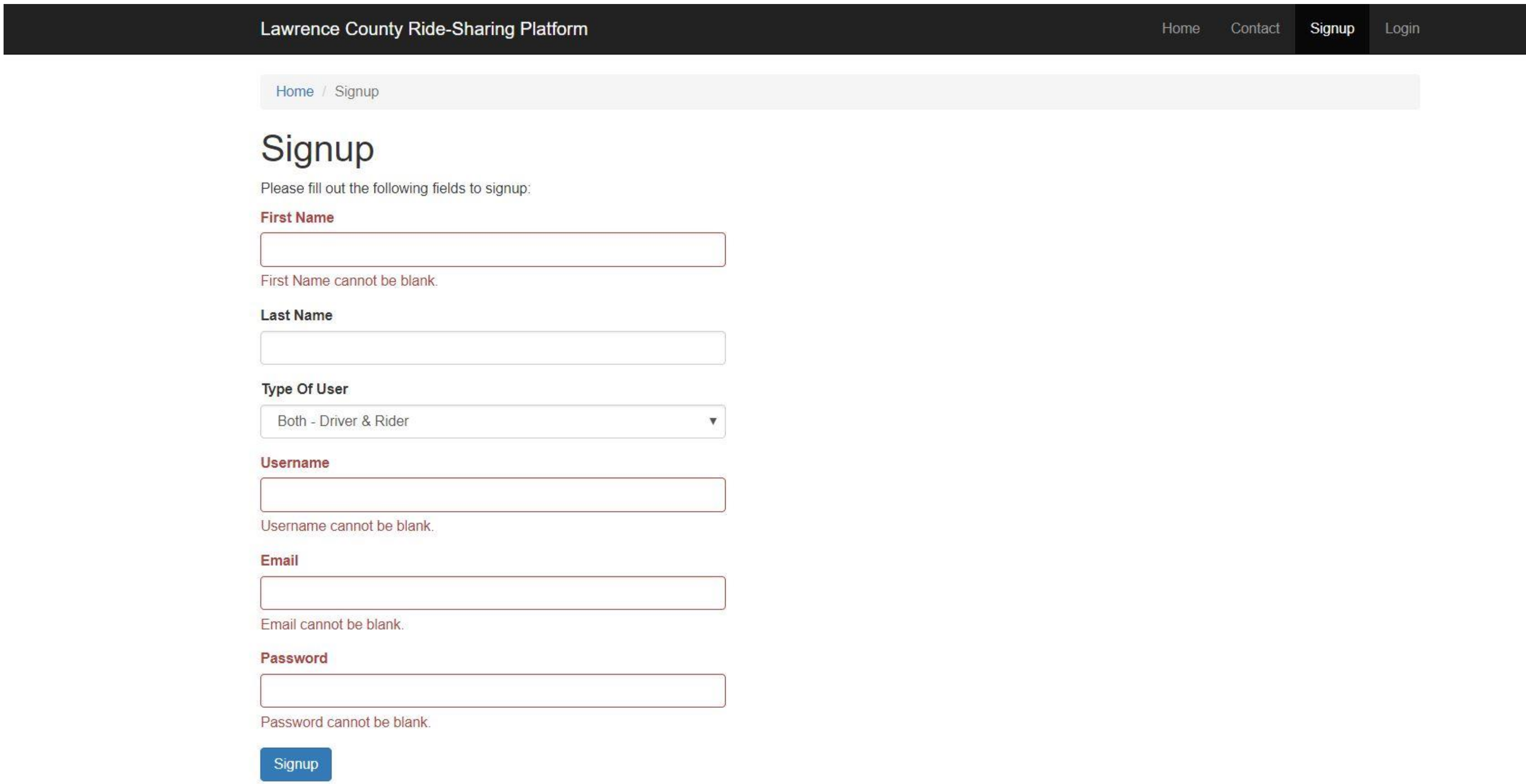
After you click on the Register button, proceed by clicking on each tab across the top of the next page (Preferences and Profile) to enter information that will create your commute information. **RideShare can not provide a match list for you, nor include your name on any match list, if this information is not completed.** After you have entered the information, click on the tab labeled Matches to find others who have the same commute as you. You can then send confidential emails to ask questions about joining a carpool or vanpool.

Existing Platforms: eRideShare



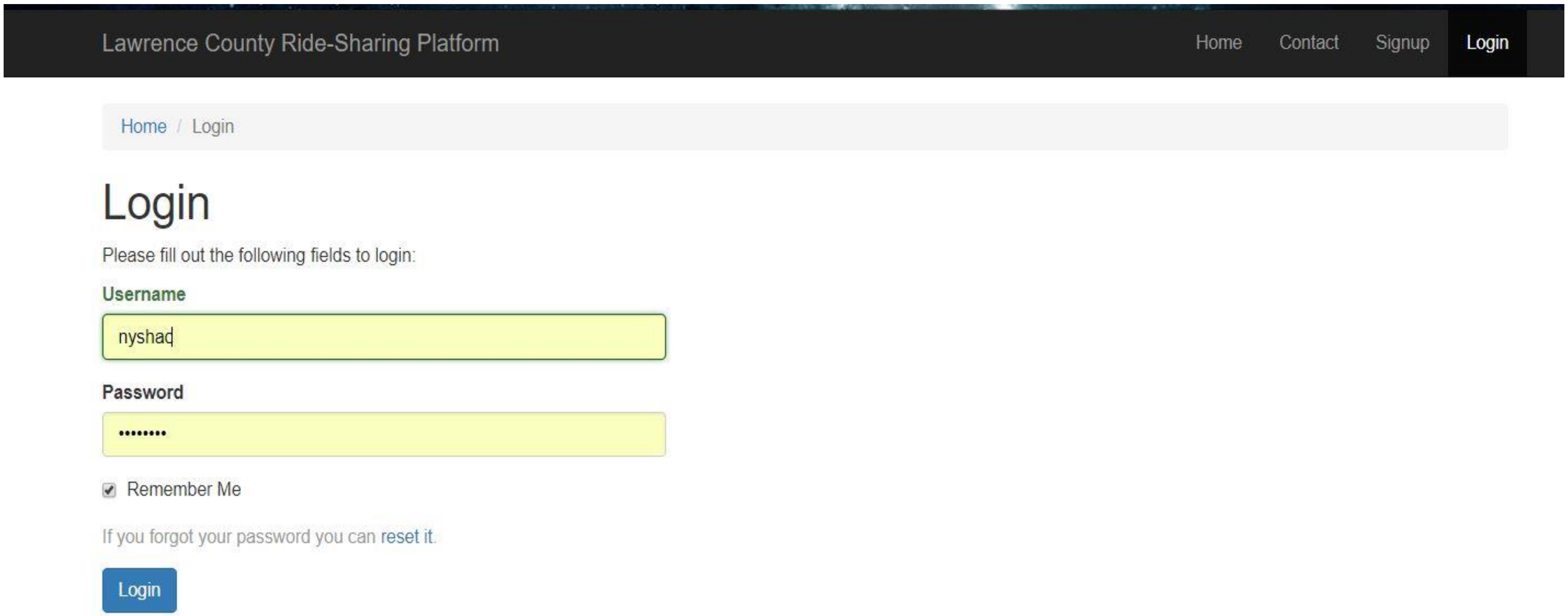


Sign Up Page

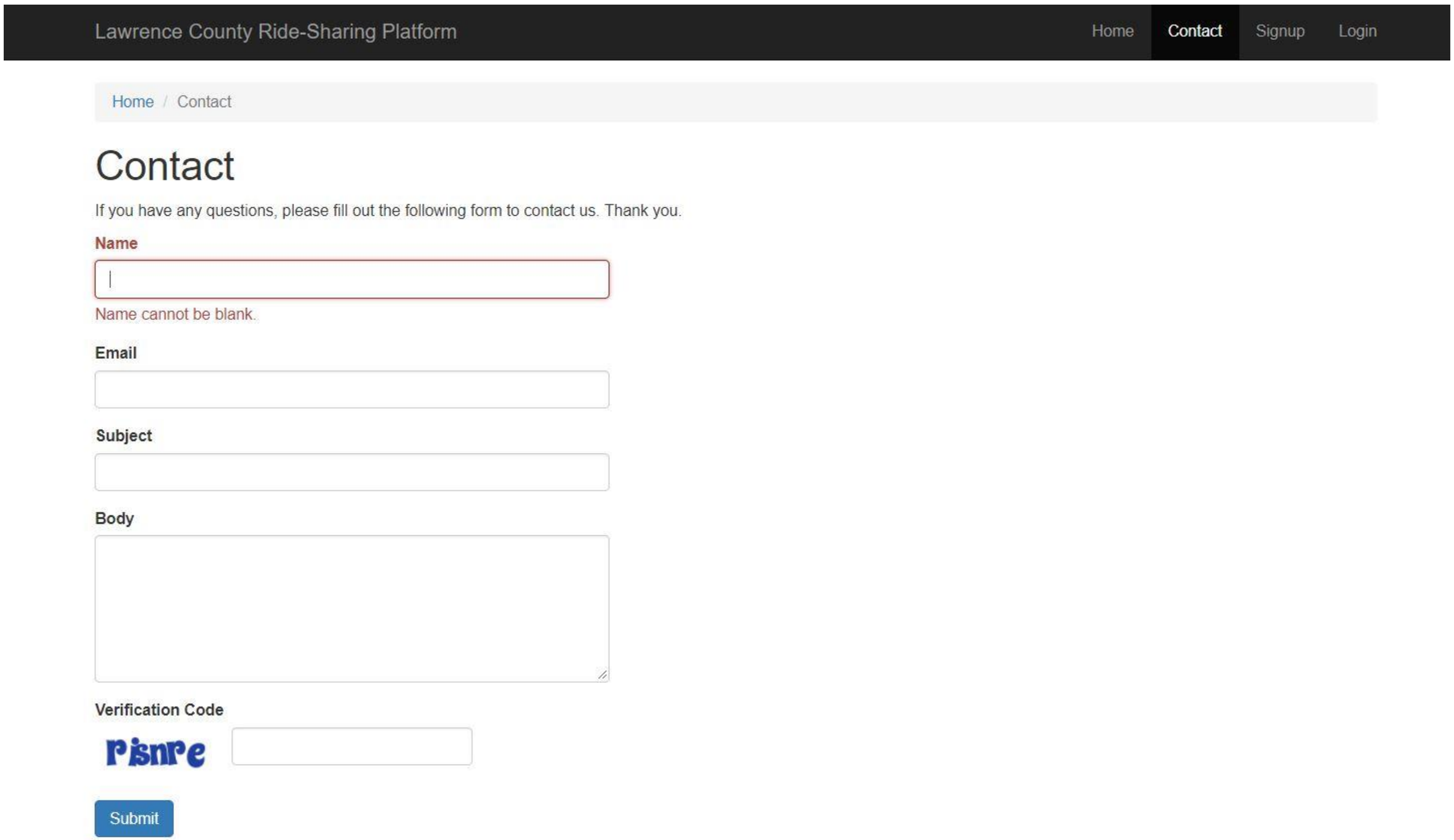

Lawrence County Ride-Sharing Platform
Home
Contact
Signup
Login
Home / Signup
Signup
Please fill out the following fields to signup:
First Name
First Name cannot be blank.
Last Name
Type Of User
Both - Driver & Rider
Username
Username cannot be blank.
Email
Email cannot be blank.
Password
Password cannot be blank.
Signup

Lawrence County Peer-to-Peer Ride-Sharing Platform

- Login Page

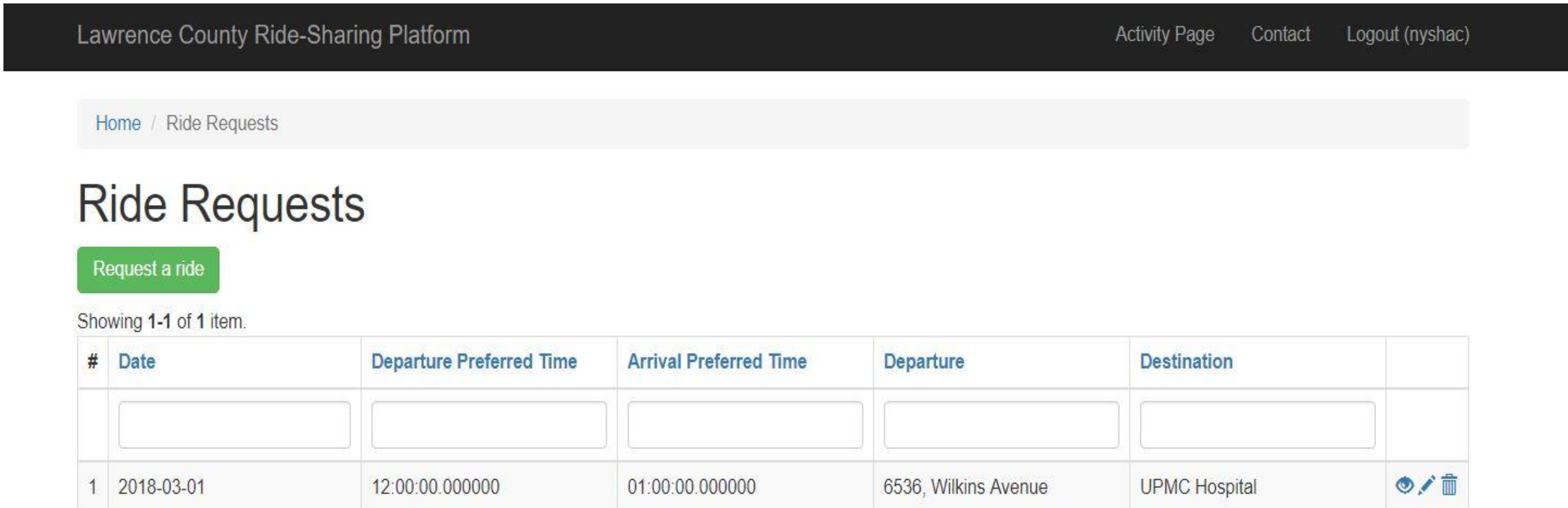


- Contact Us Page



Lawrence County Peer-to-Peer Ride-Sharing Platform

- View Previous Requests Page



Lawrence County Peer-to-Peer Ride-Sharing Platform

- View Previous Posts Page