



UNIVERSITY OF
MARYLAND

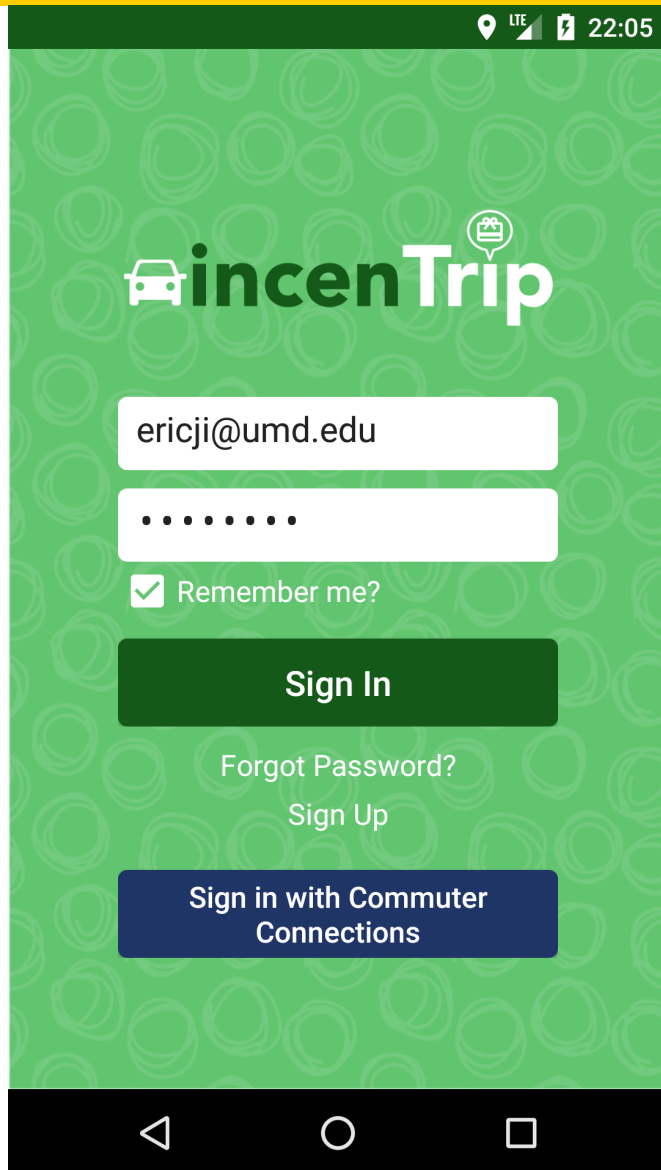
National Transportation Center

Project PI: **Dr. Lei Zhang**

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Director, National Transportation Center
Director, Maryland Transportation Institute
University of Maryland
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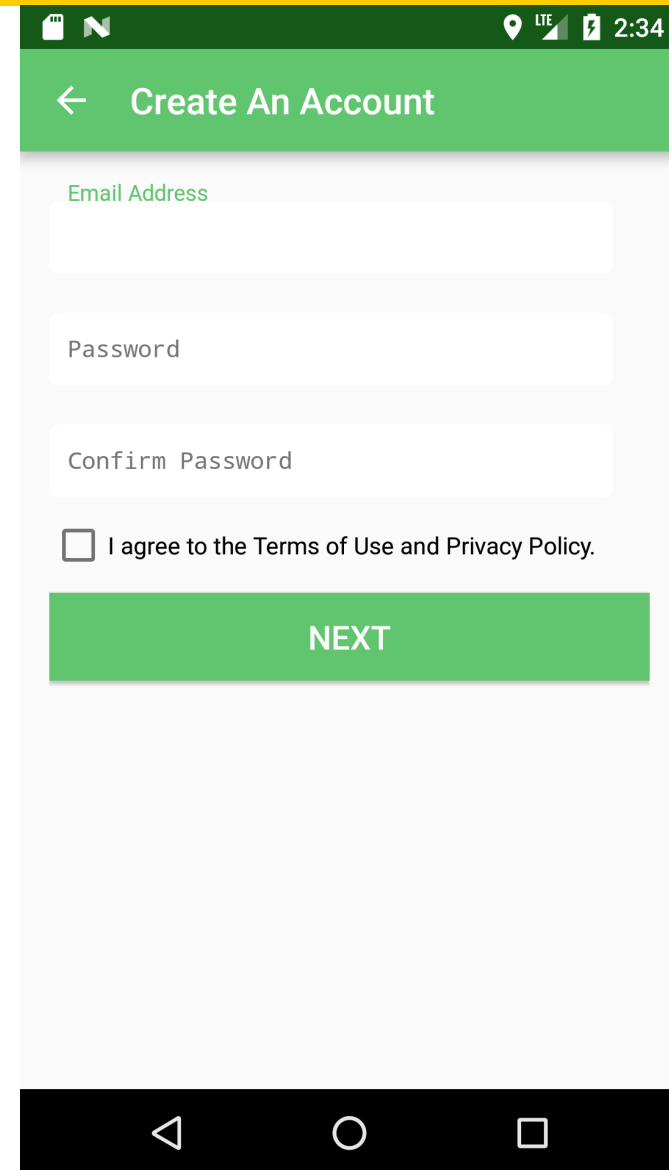
- ✓ **Alpha tests between Apr.~Jul. 2017**
- ✓ **Beta tests started in Aug. 2017**
- ✓ **Android version is completed and iOS version is under development.**

Smartphone App Interface

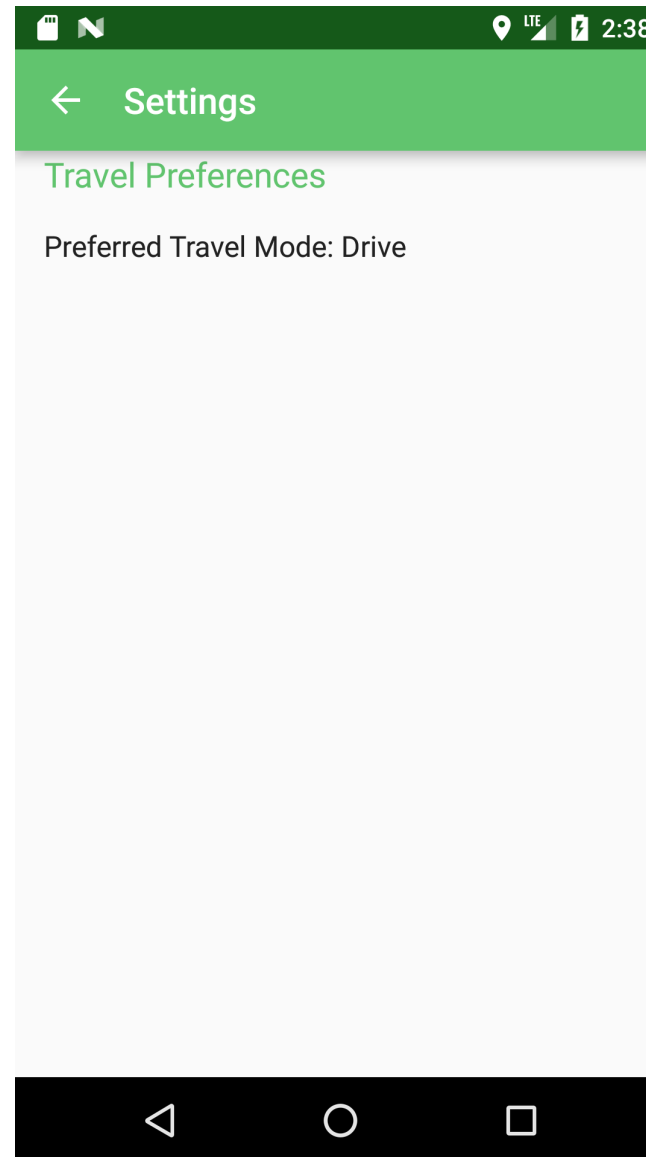
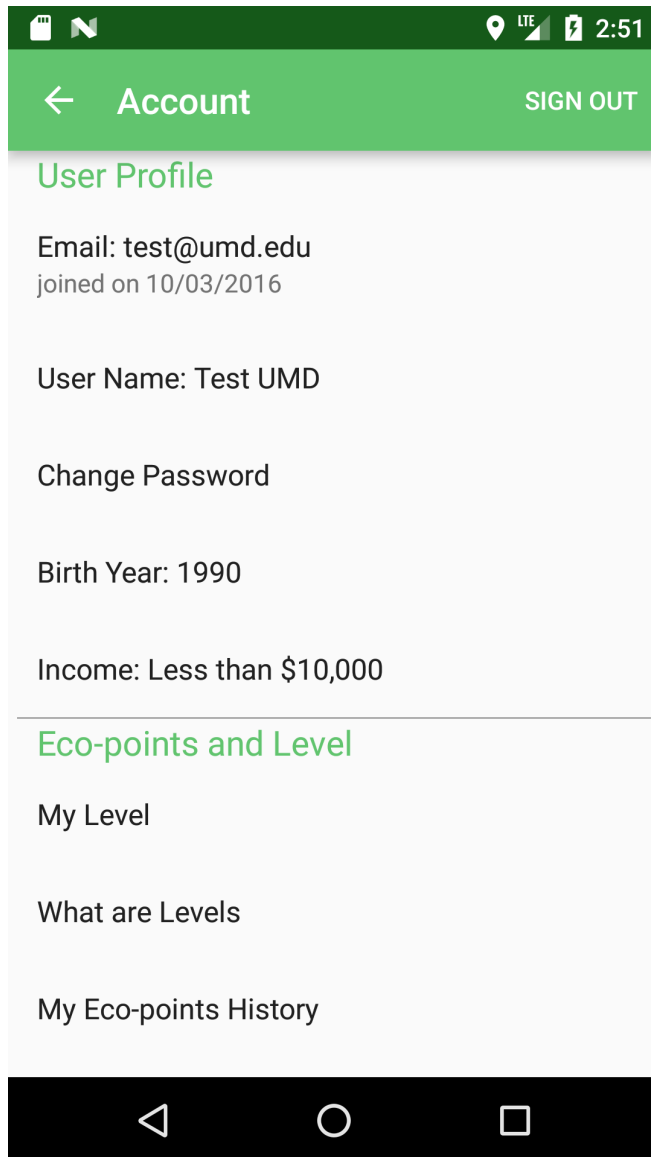


✓ **Registration and Invitation Incentive**

✓ **Social Network Accounts Accessible**



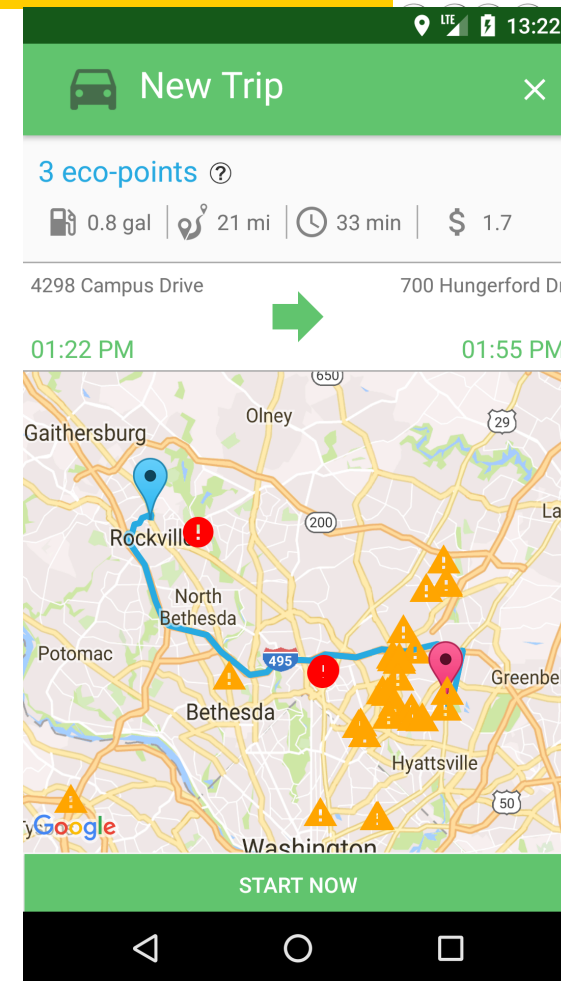
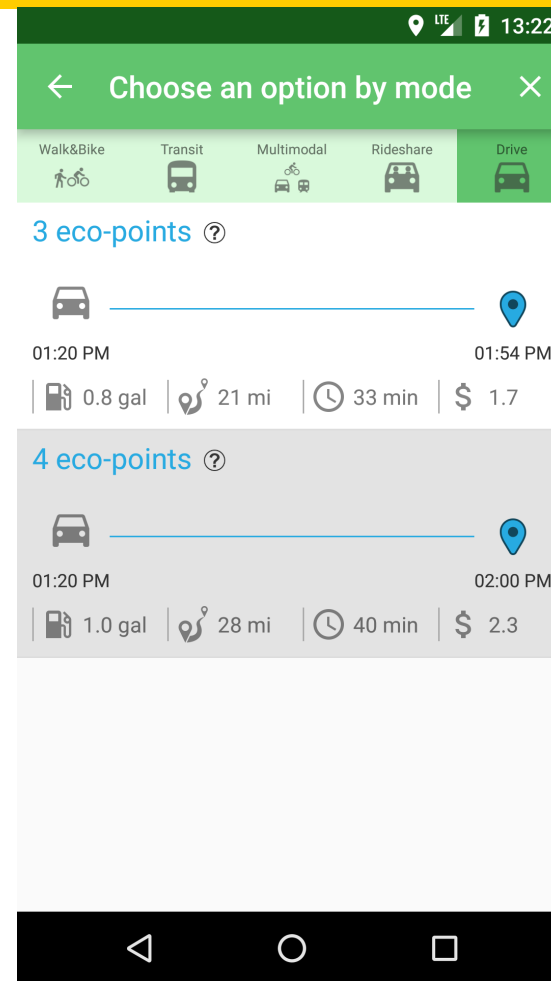
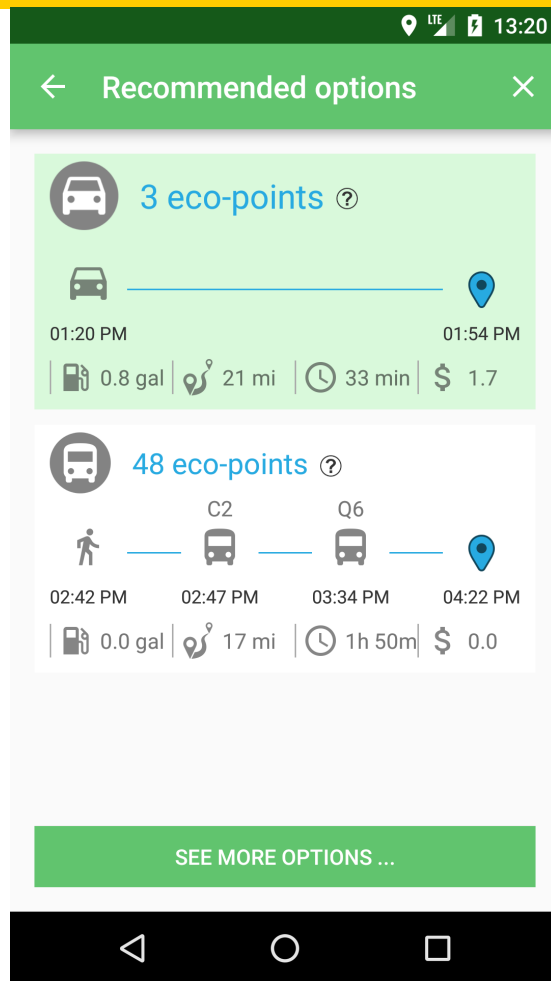
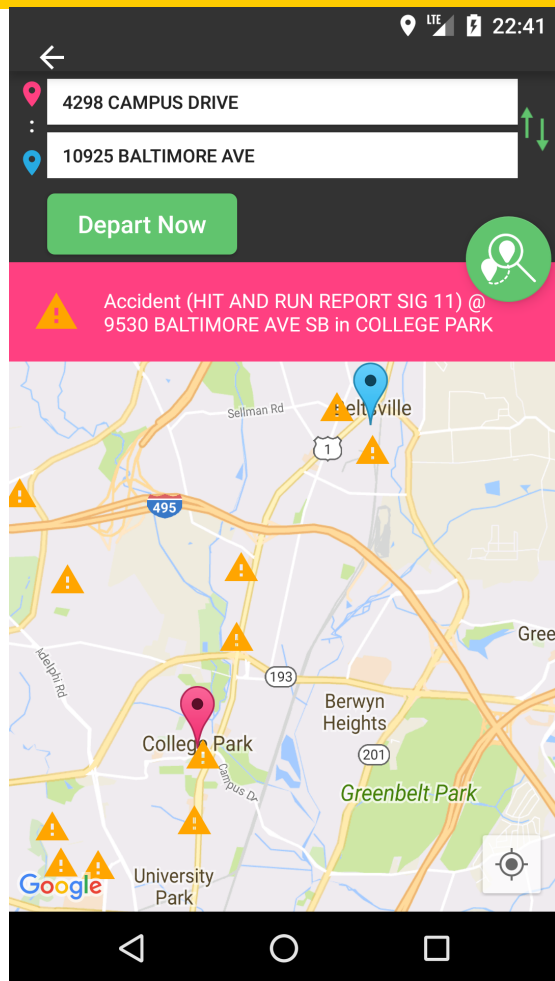
Account & Settings



✓ **User Profile Management**

✓ **Travel Preferences Setting**

Plan a Trip

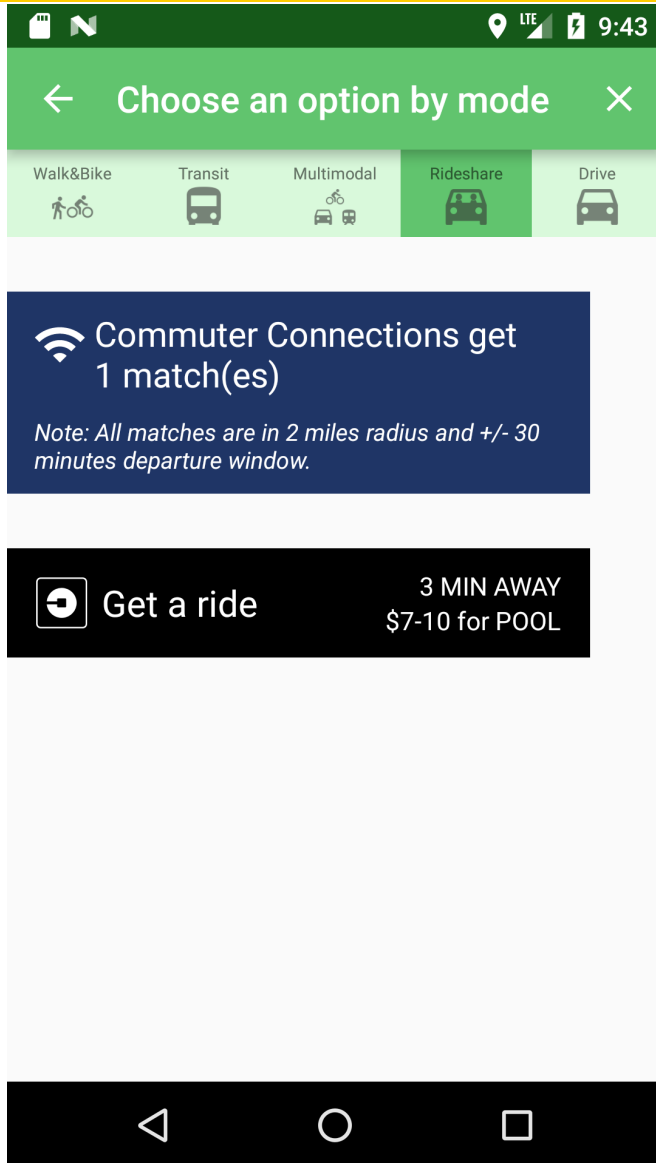


- ✓ Flexible Departure Time
- ✓ Reserve Future Trips

- ✓ Alternative Modes Options
- ✓ Dynamic Route Options

- ✓ Earn Points
- ✓ Accident & Weather Alerts

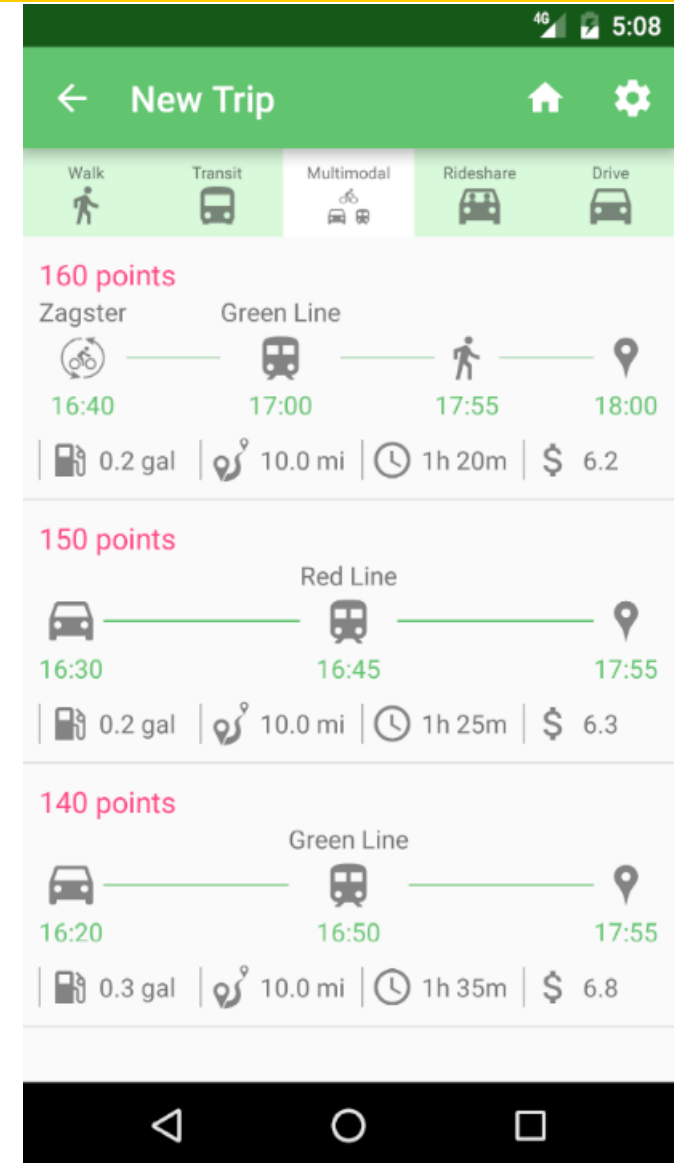
Ride-sharing/Ride-sourcing Travel Options



✓ **Commuter Connections Ride Matches**

✓ **Uber Pool Integration**

✓ **Bike Sharing in Multimodal Options**



Trip History and Dynamic Re-Planning

My Trips

- Shopping To 700 Hungerford Dr, Wed, Aug 16, 10:15 PM-10:58 PM, expired
- Weekend Trip To 11566 Model Rd, Fri, Aug 25, 01:45 PM-04:38 PM, expired
- Shopping To 700 Hungerford Dr, Thu, Aug 24, 03:45 PM-04:18 PM, expired
- shopping 821 To 700 Hungerford Dr, Mon, Aug 21, 11:15 AM-11:55 AM, expired
- Shopping To 19721 Frederick Rd, Today, 03:00 PM-03:35 PM

SCHEDULED | HISTORY

My Trips

You've taken 211 trip(s).

Recent 30 trips are:

- 5303 Smiths Cove Ln, Greenbelt, MD 20770, USA, 15 min, 2.6 mi, 09/07/2017
- To 387 Technology Dr, College Park, MD 20740, USA, 19 min, 2.4 mi, 09/06/2017
- Regents Dr, College Park, MD 20740, USA, 16 min, 2.6 mi, 09/06/2017
- To 5342 S Center Dr, Greenbelt, MD 20770, USA, 9 min, 6.6 mi, 09/05/2017

SCHEDULED | HISTORY

as TO 10925 Baltimore Ave

Reserved Option

2 eco-points

12:15 PM | 12:36 PM

0.32 gal | 8.3 mi | 21 min | \$ 0.73

Recalculated Options
Clicking to take the trip!

1 eco-points

12:15 PM | 12:33 PM

0.27 gal | 4.8 mi | 18 min | \$ 0.62

2 eco-points

12:15 PM | 12:36 PM

0.32 gal | 8.3 mi | 21 min | \$ 0.73

- ✓ Trip Notifications
- ✓ Dynamic Rescheduling and Re-routing As Network Conditions Change
- ✓ Taken-Trips Records and Frequent Trips

Eco Driving



- ✓ Driving Behavior Analysis
- ✓ Driving Recommendations
- ✓ Fuel Efficiency Comparison
- ✓ Fuel Efficiency Calculation
- ✓ Improvement Suggestions
- ✓ Fuel Saving Prediction

Fuel Efficiency Score 61.2 ×

Last updated - 02/17/2017

Grade

D

86%

Need more points? Just keep moving!

- * Stay at grade D: +100 points
- * Reach grade C: +200 points
- * Reach grade B: +300 points
- * Reach grade A: +500 points

GRADE
SUGGESTION
EFFICIENCY

Fuel Efficiency Score 61.2 ×

Last updated - 02/17/2017

Driving Suggestions

Speed

Your top speed was 81 mph. If you had limited to 55 mph your top speed you would have saved 16.1% of fuel

Braking

Always appealing to the foot brake is a waste of energy. so to reduce it should better anticipate traffic situations. Try taking off the throttle early and brake with the engine.

Acceleration

Aggressive acceleration when exiting a roundabout or traffic light will always cause excessive consumption. Less obvious but equally or more harmful for consumption are the accelerations in a situation of high speed, for example when re-entering a freeway.

GRADE
SUGGESTION
EFFICIENCY

Fuel Efficiency Score 61.2 ×

Last updated - 02/17/2017

Fuel Efficiency

You can save gas money by taking your driving efficiency to the next grades.

- * Reach grade B: \$100/year *
- * Reach grade A: \$250/year *

Driver Type	Efficiency (%)
Most Efficient Driver	100%
Average Driver	78%
You	65%

GRADE
SUGGESTION
EFFICIENCY

Eco Points

✓ Taking Trips
Earning Point

✓ Challenges &
Gamification

← My Eco-points History

Total eco-points: 927
Eco-points used: 0
Eco-points balance: 927

Action	Eco Points	Date
Trip to 387 Technology Dr, College Park, MD 20740, USA as drive	+1	09/07/2017
Trip to 5342 S Center Dr, Greenbelt, MD 20770, USA as drive	0	09/06/2017
Trip to 387 Technology Dr, College Park, MD 20740, USA as drive	+1	09/06/2017
Trip to 5342 S Center Dr, Greenbelt, MD 20770, USA as drive	+1	09/05/2017
Trip to IKEA College Park Home	0	09/05/2017

← How To Earn Eco-points

Wanna earn eco-points and reach high levels?
Go for some of these eco-points opportunities:

Action	Description	Basic Point
Register	Register a new account.	+500
Invite a Friend	Invite a friend. Both inviter and invitee get points once the invitee registers.	+200
Complete User Profile	Complete user profile (preferred mode, income, age, gender, average annual driving distance)	+500
Complete Vehicle Info	Provide all vehicle information.	+500
Improve Eco	Improve Eco-Points grade	+1000


★ Transit Month
08/31/2017 - 09/29/2017

Take public transit in September to earn more eco-points. Every trip will get 20 more points.

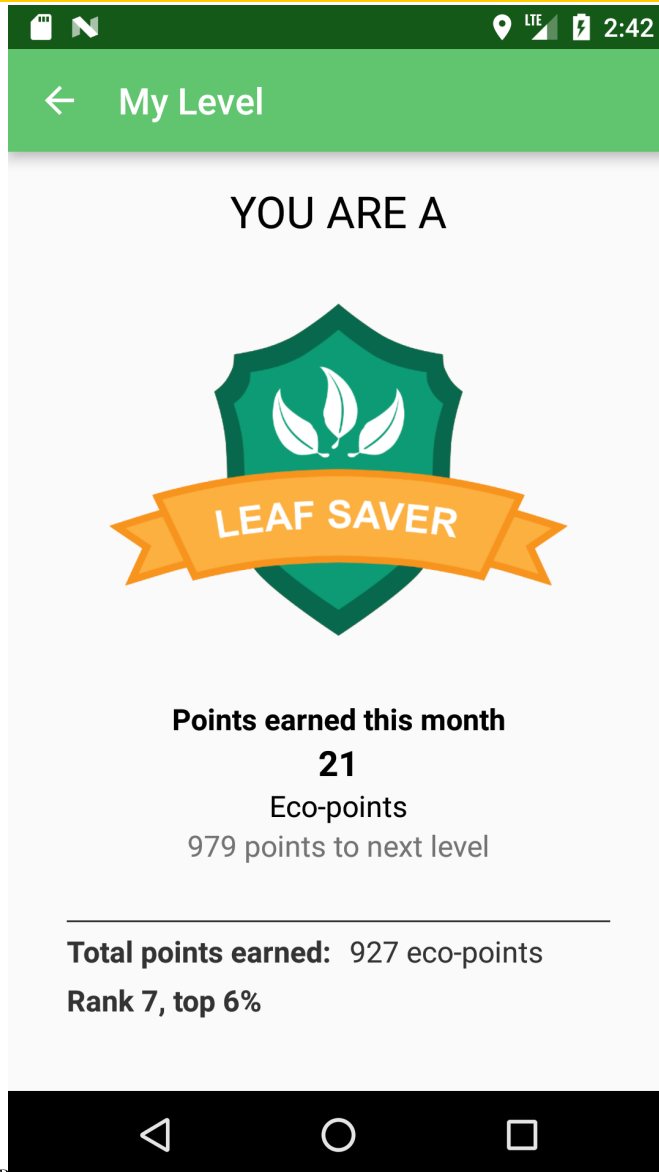
Criteria

- Level Requirement: **All**
- Mode Requirement: **Transit**
- Interval: **Daily**
- Trip: **Every Trip**

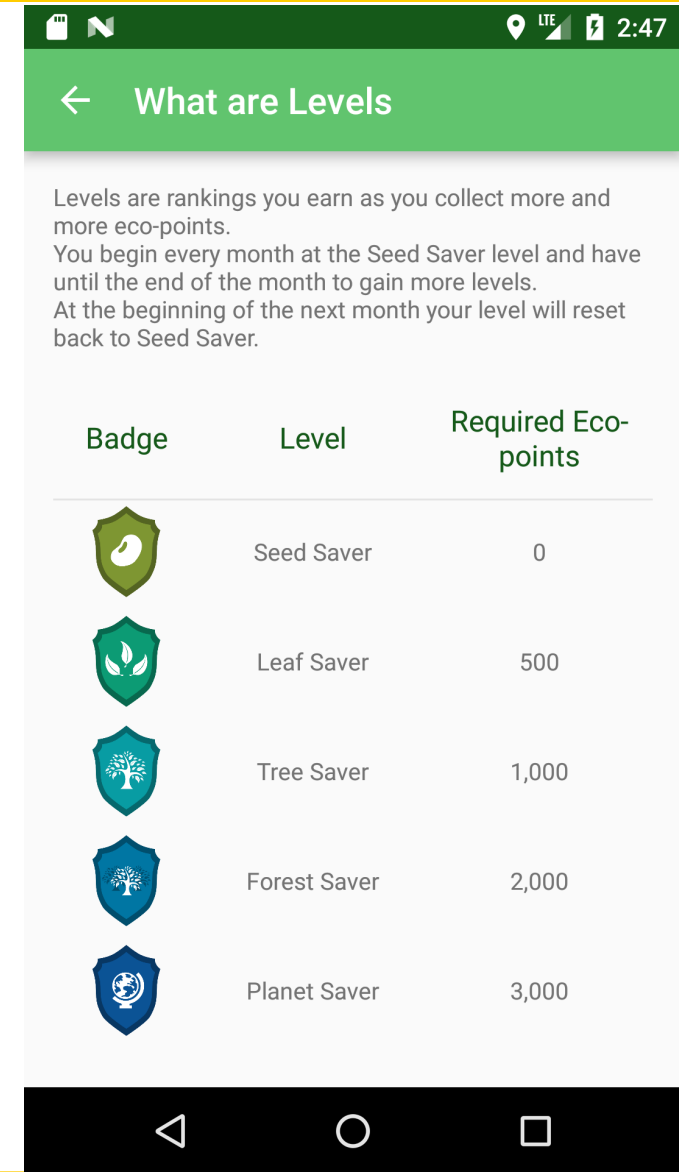
Bonus
Extra +20 eco-points



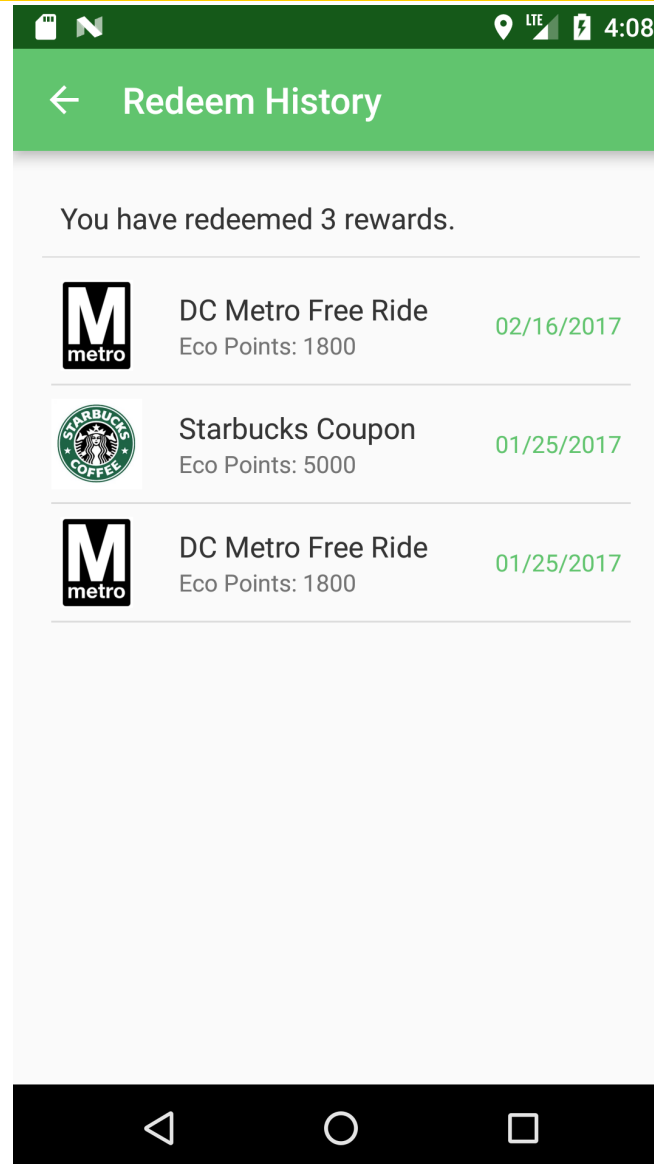
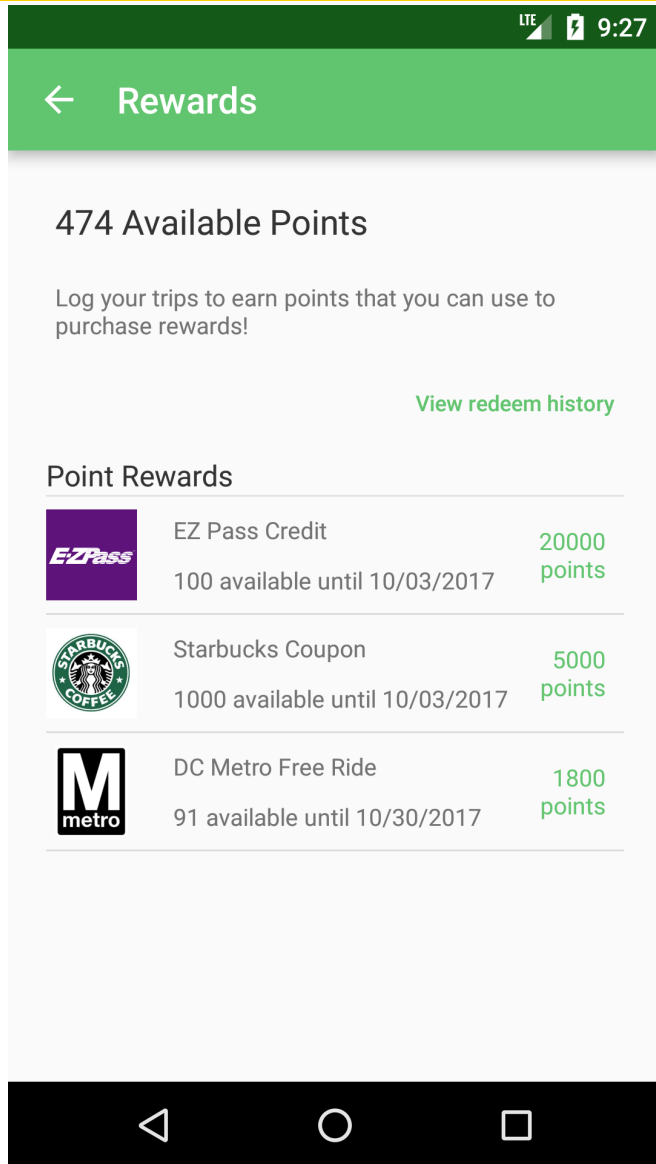
Membership Levels and Reward Tiers



Point-Based Membership Tier System



Rewards



✓ **Energy Saving Monetary Incentives**

✓ **Energy Savers Extra Bonus**

✓ **Other incentives provided by a third party or an agency**

Agency Dashboard

- ✓ Congestion, Energy & Emission Impact
- ✓ Incentives, their Distribution and Return on Investment
- ✓ Behavior Change Statistics

incenTrip
DOEE AGENCY DASHBOARD

Area: District of Columbia
Time Period: 01/01/2016

Total Users: 2,126
Total Trips: 512,175

FUEL USAGE
 Total gallons of fuel saved : 320,526
 Total cost of fuel saved : \$818,734

EMMISSIONS REDUCTION
 Total tons of emission reduced : 14,528
 Total cost of emission reduced : \$290,808

CONGESTION REDUCTION
 Total hours of congestion reduced : 36,829
 Total cost of congestion reduced : \$570,725

TOTAL BENEFITS : \$1,780,267

TOTAL INCENTIVES : \$308,652

RETURN ON INVESTMENT : 561%

Traveler Behavior Change

- Original
- Change Route
- Change Departure time
- Change to Transit and ride Share

Trips taken by mode:

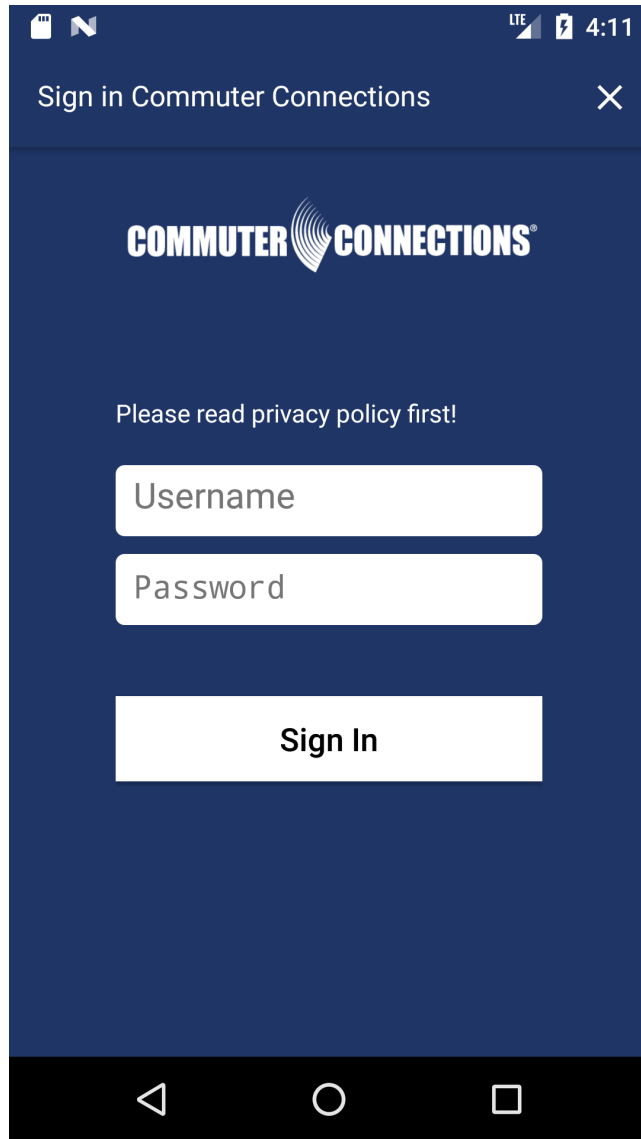
Transit:	2,082
Drive:	1,584
Ride Share:	1,076
Multimodal:	154
Bike/Walk:	141

Incentive Distribution by Home Location

Incentive Distribution by Household Income

Incentive Distribution by Age

incentTrip-Commuter Connections Integration



Sign in Commuter Connections

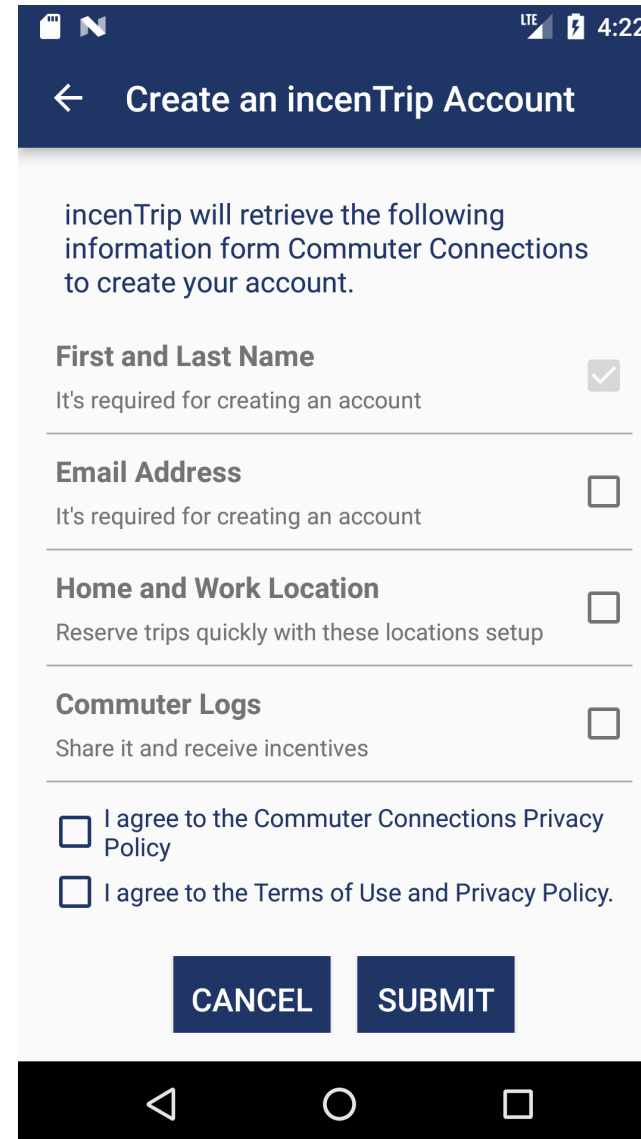
COMMUTER CONNECTIONS

Please read privacy policy first!

Username

Password

Sign In



Create an incentTrip Account

incentTrip will retrieve the following information form Commuter Connections to create your account.

First and Last Name
It's required for creating an account

Email Address
It's required for creating an account

Home and Work Location
Reserve trips quickly with these locations setup

Commuter Logs
Share it and receive incentives

I agree to the Commuter Connections Privacy Policy

I agree to the Terms of Use and Privacy Policy.

CANCEL SUBMIT

✓ Easy to Login
incentTrip

✓ Share
Information on
Privacy Policy

CC-UMD Collaboration: Flextime APIs



Flextime API

Departure Times

Travel Time Predictions

Accidents for Routes

