

CAPSTONE

FINAL PRESENTATION

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CROWDSOURCED



CROWDS

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CROWDS

OUR PROPOSAL

Crowdsourced Crowds is a **mobile application** that estimates the **real-time population density** of a particular location. This population data is **anonymized** and displayed on live map with a **heatmap** overlay for users to view. Our app aims to help users make more **informed decisions** about where and how they spend their time.

UNDERSTANDING THE OPPORTUNITY



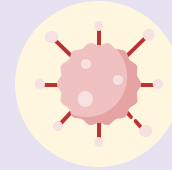
SOCIAL LIFE

Understand the social scene on and off campus



TIME MANAGEMENT

Decrease time to find a study spot and avoid waiting in lines



SOCIAL DISTANCING

Avoid high-density locations



TRAFFIC CONGESTION

Estimate which driving/walking routes will be busy and when



PERSONAL DATA

Store your own private location data

SOLUTION USER FLOW WALKTHROUGH

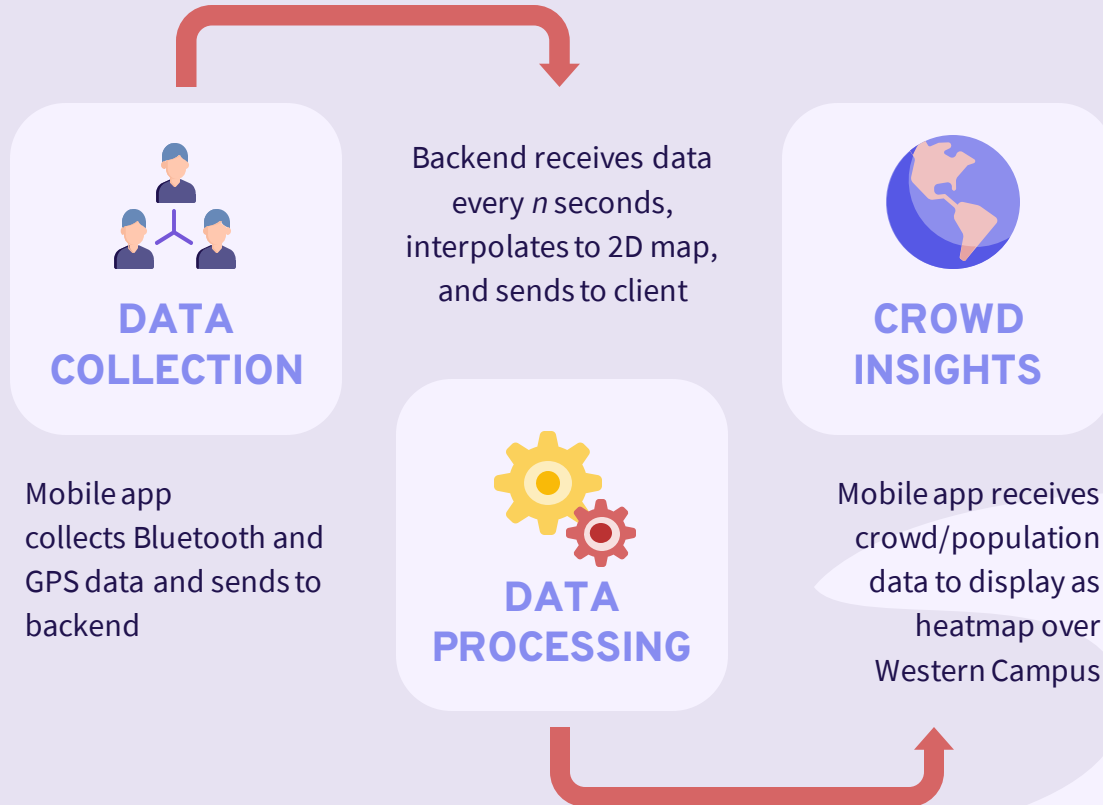
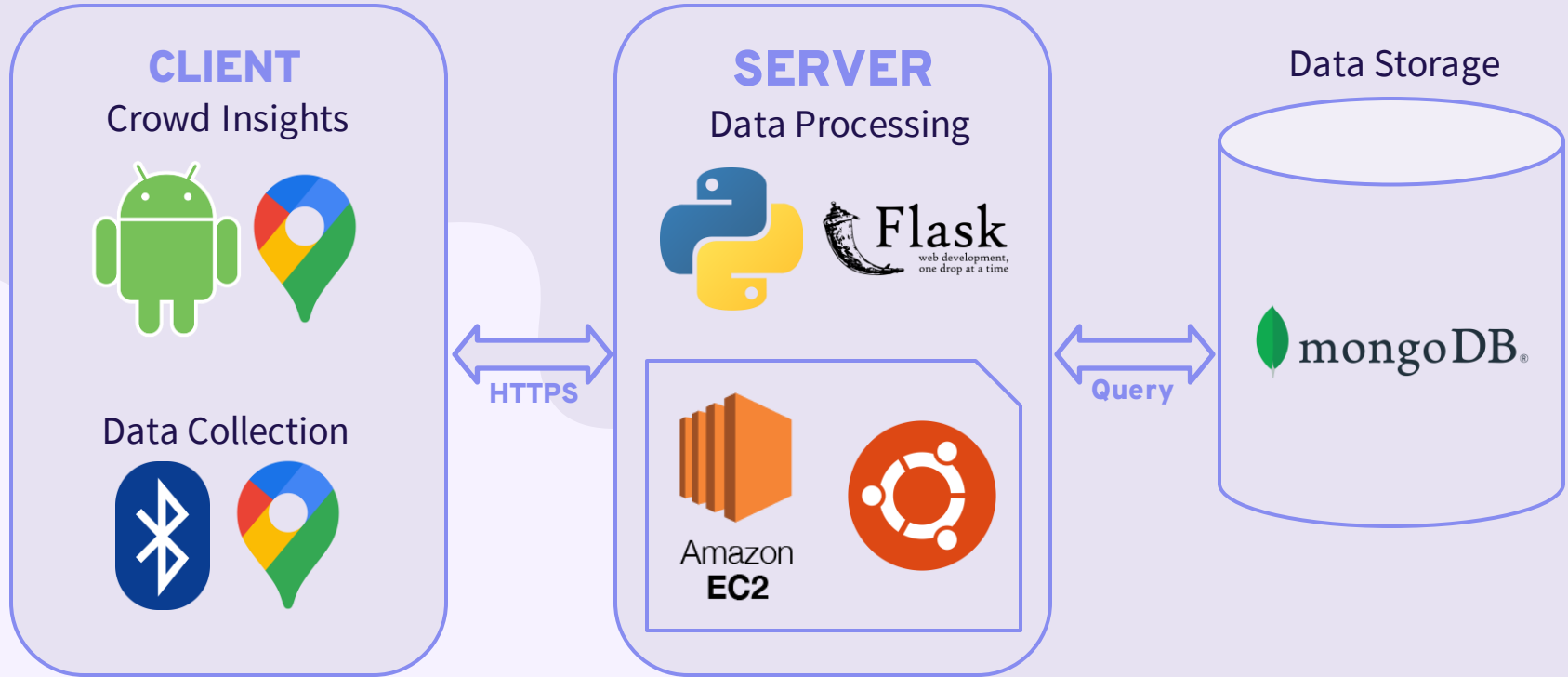
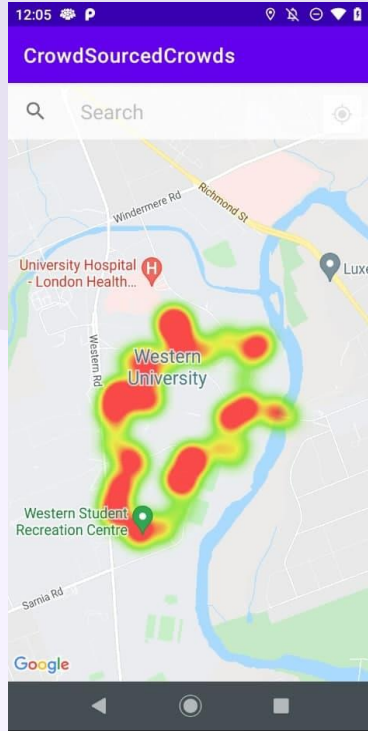


DIAGRAM SYSTEM DESIGN

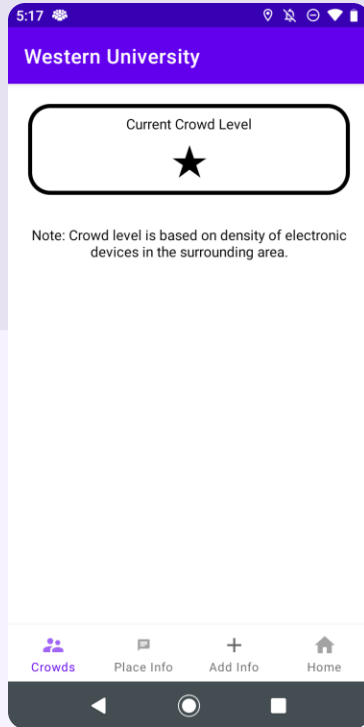


FEATURE VIEW HEATMAP



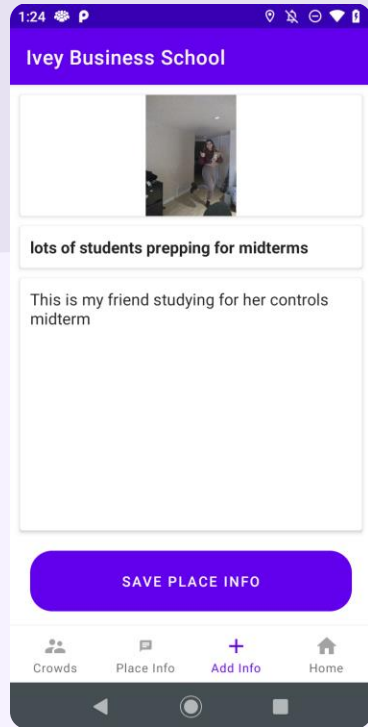
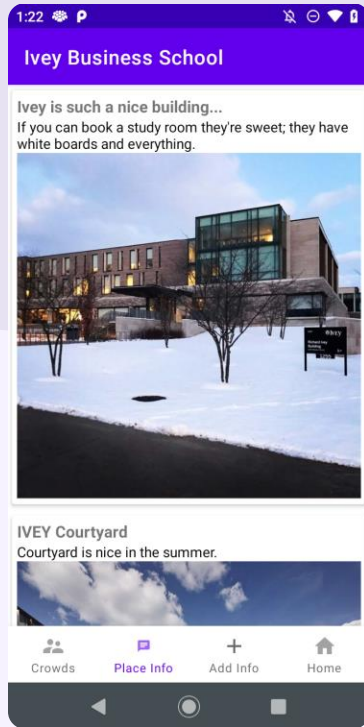
- Main Page of app shows user a map of campus and an **overlaying Heatmap**
- Heatmap colours represent current population density (**hotspots** or **coolspots**) of locations on campus
- Users can access a straightforward **visual guide** to determine where they would like to go

FEATURE CHECK LOCATION STATUS



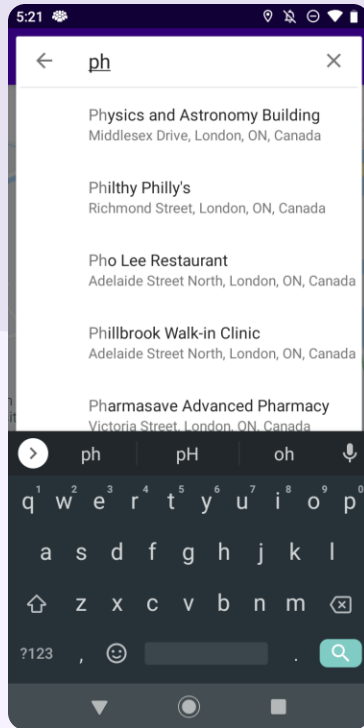
- Users can **view location busyness** on “Place Info” page
- **Busyness API** gets location's busyness by sending request to Backend
- Backend sends **number of devices** at that location and that number is interpreted as a **busyness rating** by app

FEATURE UPLOAD PHOTOS/COMMENTS



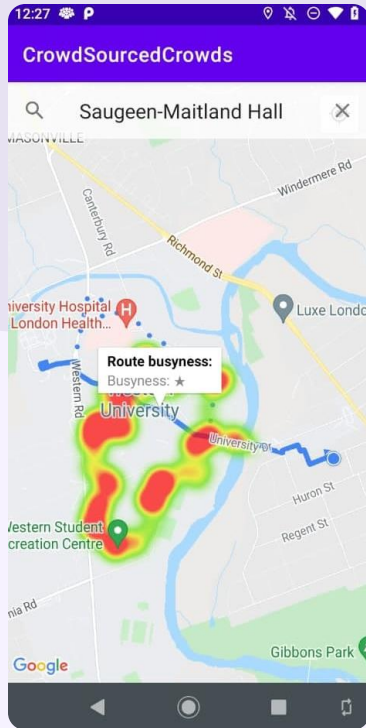
- Users can **view photos and comments** about individual locations
- Users can **upload** their own photos about a location for other users to view

FEATURE SEARCH LOCATIONS



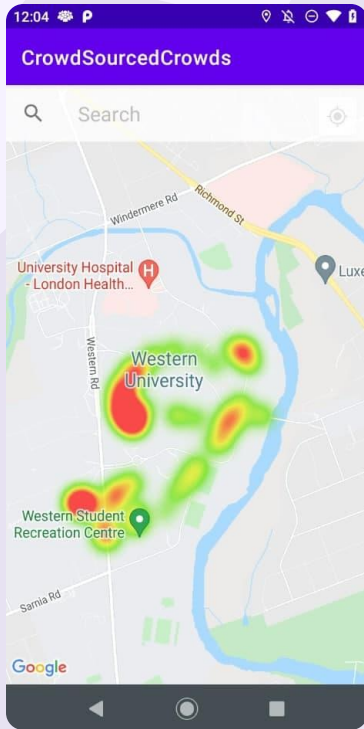
- Users can **type in search bar** to find a location
- Search function uses Google Places SDK's **autocomplete service** to return place predictions in response to user queries
- Predictions are **biased** to the user's surrounding location

FEATURE GET WALKING DIRECTIONS

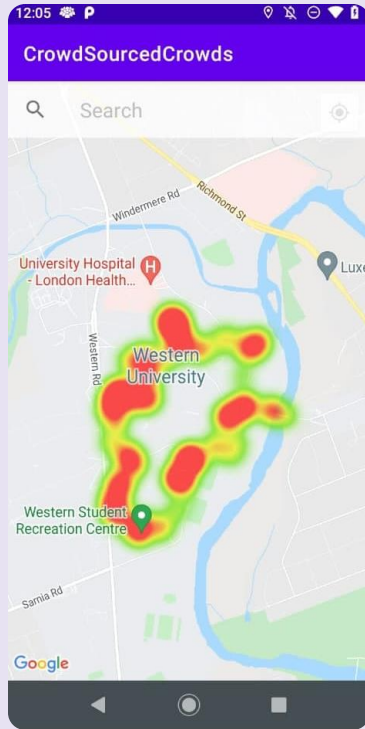


- Users can **get directions** between their **current location** and a POI
- Google Directions API returns Lat/Long coordinates depicting a route
- Busyness API determines busyness along each point in the route to compute **population density** along route
- Users can select least-dense route for increased social distancing

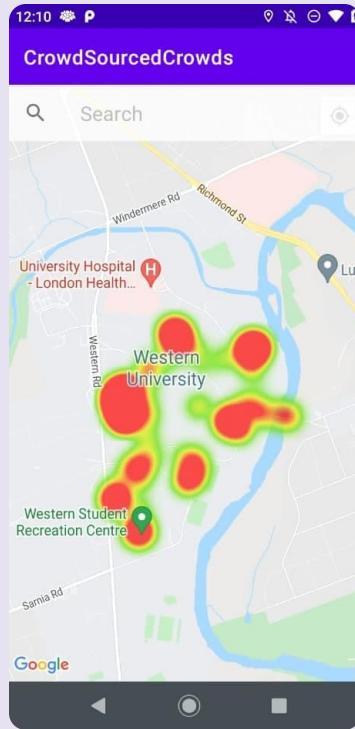
INSIGHTS HISTORICAL BUSYNESS



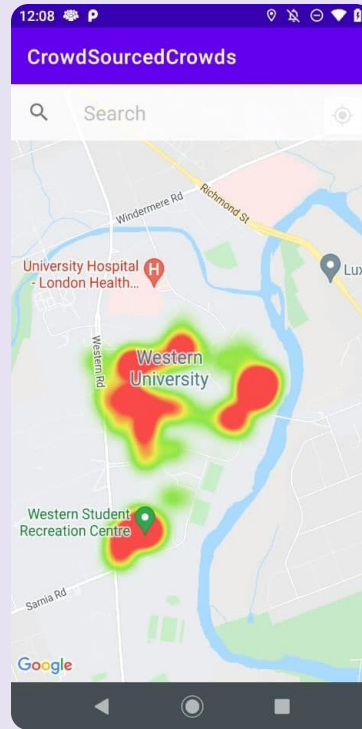
11:00 AM, Mar 7



3:30 PM, Mar 7



6:00 PM, Mar 7



10:00 PM, Mar 7



10:00 PM, Mar 4

TAKEAWAYS PRIVACY CONCERNS



FUTURE DEVELOPMENTS



CROWD PROJECTIONS

Leverage historical data to predict busy times for locations



BOOKMARK LOCATIONS

Implement functionality to allow users to save locations



IPHONE COMPATIBILITY

Covert mobile app to work on iOS to expand user base



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Make more informed decisions about where and how you spend your time.