

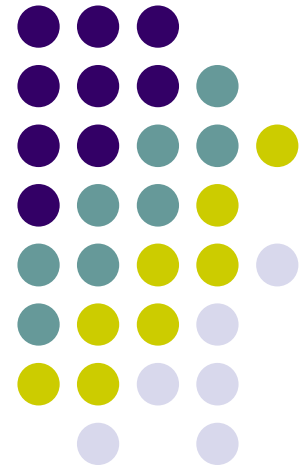
# Ubiquitous and Mobile Computing

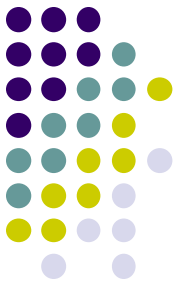
## CS 4518: *GOMPEI-STUDEI*

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# The Problem

**Problem:** Students need more flexible hours outside of class for academic assistance.

- Limited office hours
- Result of a survey: 19 out of 22 students would love some extra help from tutors. 8 are willing to pay some money for a help from a tutor.

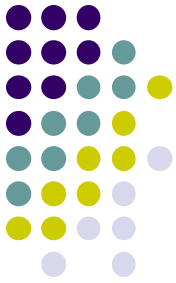
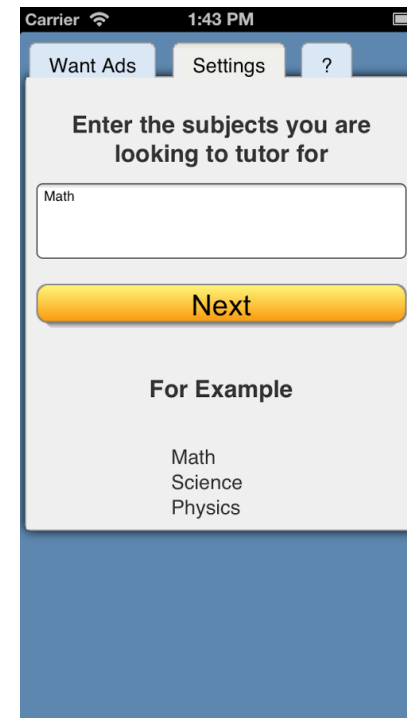
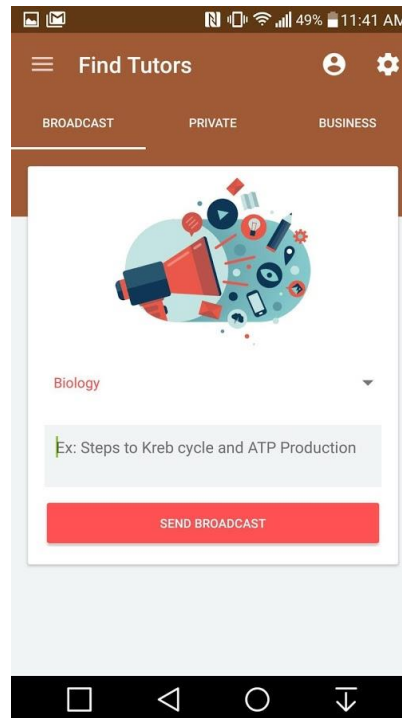
## Problem Importance:

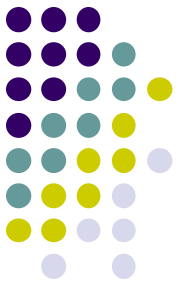
- Tutoring helps the student have a better understanding of course material, improves performance in their classes, and increases productivity.
- Many students spend hours stuck on coursework without assistance, resulting in lost time.



# Related Mobile Apps

- Scholarly
- Tutor Jobs
- Wyzant

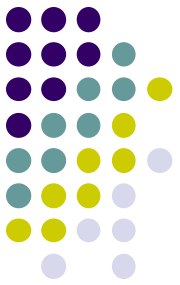




# Methodology

**Solution:** A platform for students to find nearby tutors enrolled in the same school, using their location, who are qualified to assist with a given class.

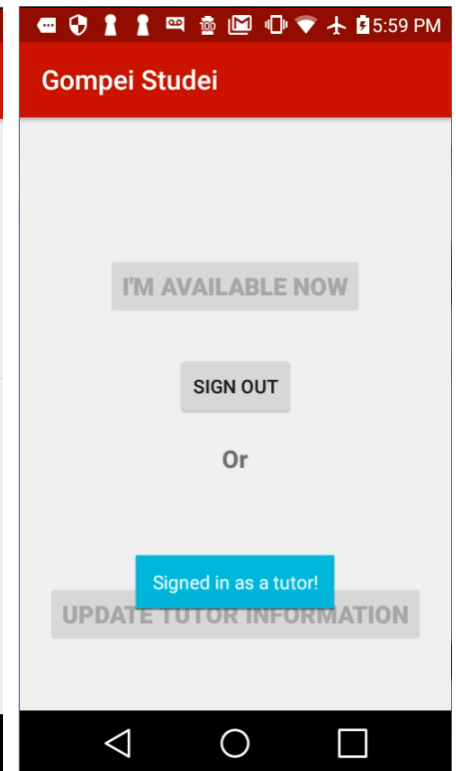
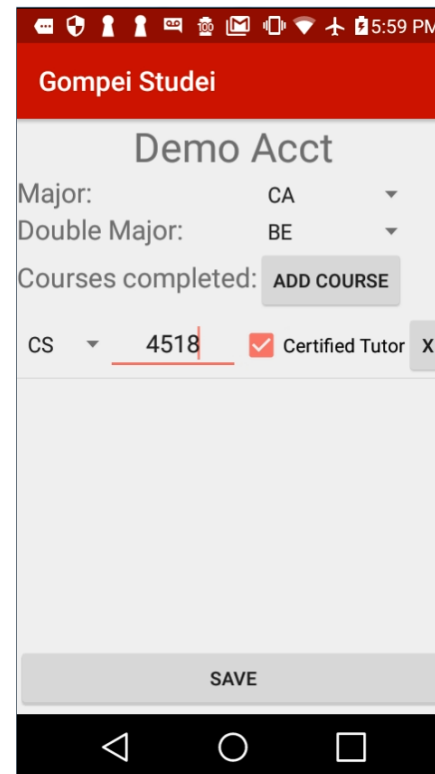
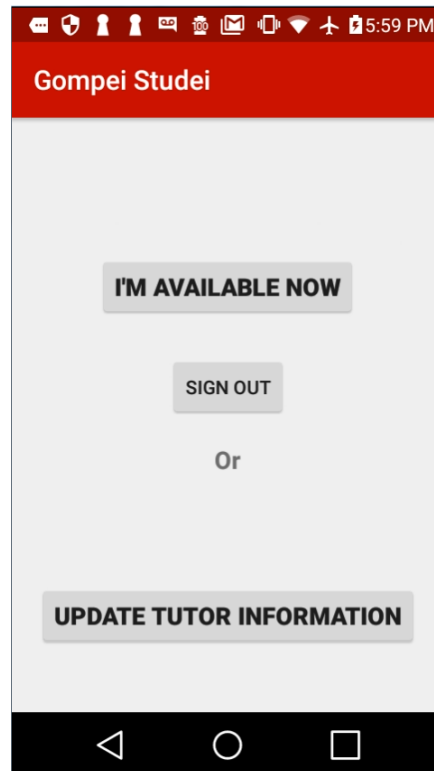
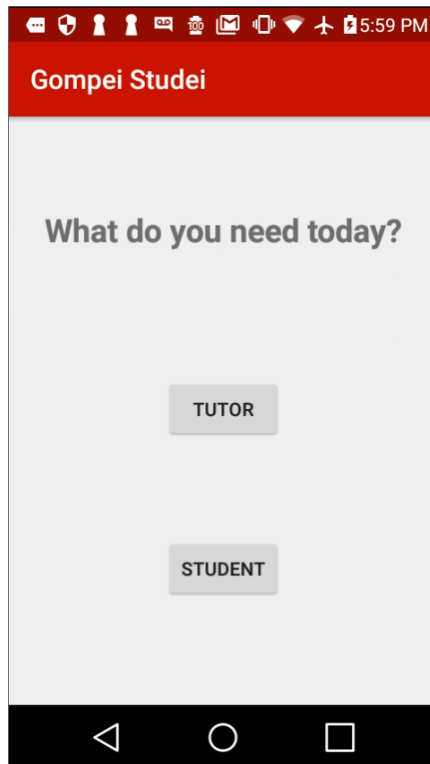
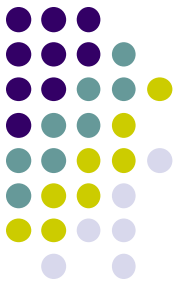
- Users can sign-in to the app when they are available for tutoring or are looking for tutoring.
- Tutors can volunteer, or register as certified if they have completed a given course.
- Once a student finds a tutor, they can contact the tutor and optionally rate them afterwards.



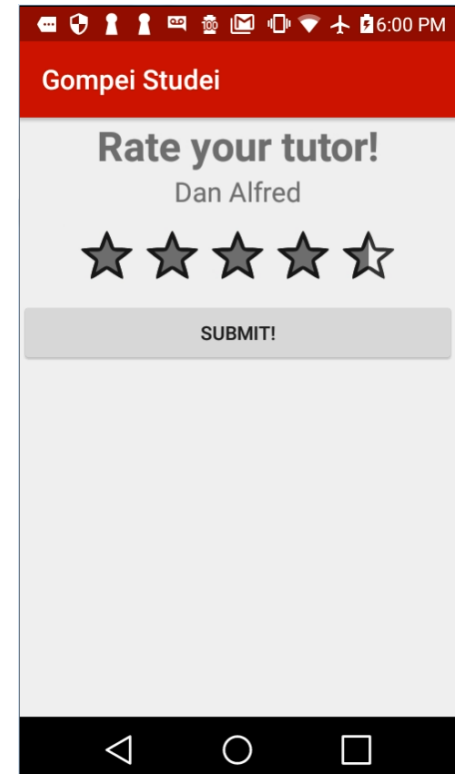
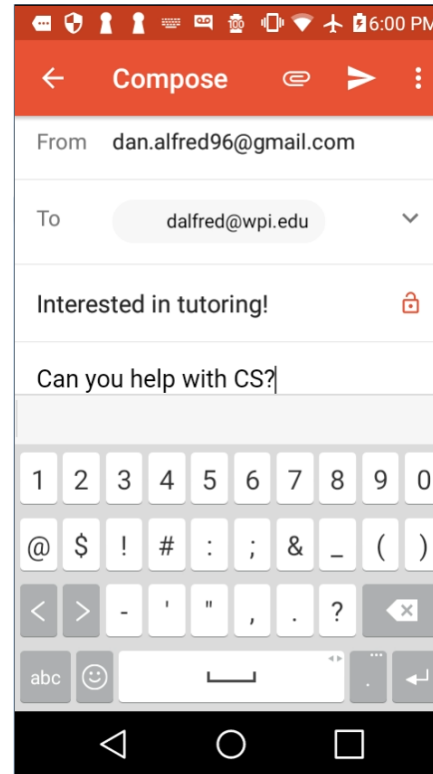
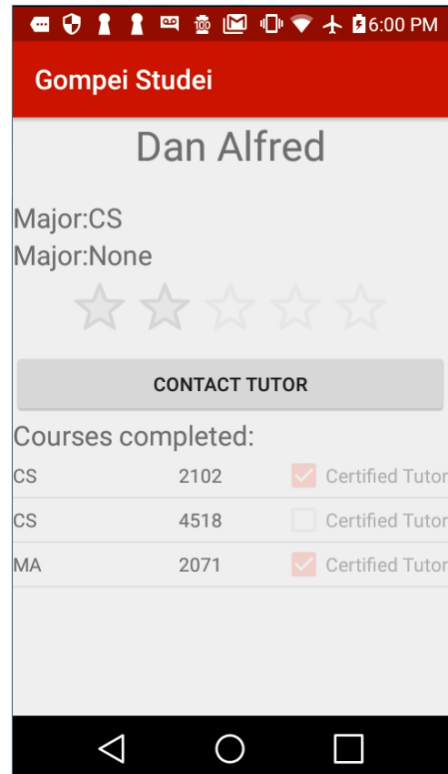
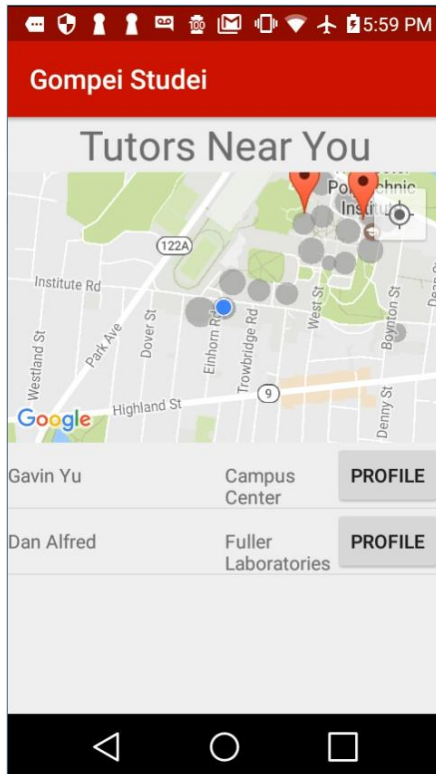
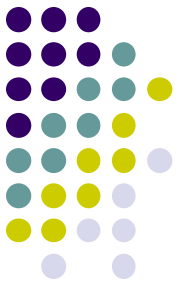
# Implementation

- Backend: JSON Web API with authentication
  - Written in PHP, uses MySQL database with 7 tables.
- App uses Volley for http requests and Google Maps and Geofences API to enhance location-oriented focus of app.
- App allows users to register and mark themselves as available for tutoring or browse tutors.
- For students, app pulls listing of available tutors from the server every five minutes, providing the tutor's relative location and link to their profile.
- The student can then email the tutor for a tutoring session, and leave a rating of the tutor afterwards.

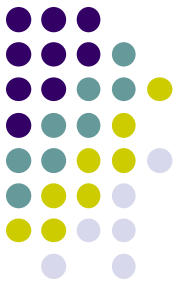
# Implementation (cont.)



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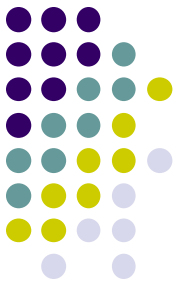
# Implementation Demo



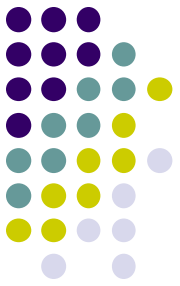
<https://www.youtube.com/watch?v=gc98wy3o1i8>



# Evaluation/Results



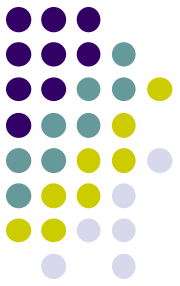
- App has potential.
- Basic but functional UI.
- Difficulty to get course completion records for certified tutor.
- Geofences had difficulty triggering depending on the size of the building.
- Will be better if available on iPhone

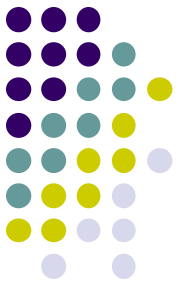


# Future Work

- Android Pay integration.
- Ability for tutors to rate students.
- Canvas/Blackboard integration for authentication.
- Extraction of Geofences into a database or config file, for flexibility among different college campuses.
- Add a chat feature or scheduler for communication with the tutor.
- Verifying certified tutor status.

# Questions?





# References

- <https://play.google.com/store/apps/details?id=com.blink.tutor&hl=en>
- <https://play.google.com/store/apps/details?id=com.tutor.to.go.android&hl=en>
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