Future Technology to Preserve and Foster College Student Health and Wellbeing
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Vision Statement
There is a stigma associated with seeking mental health services on college campuses that prevents students from getting help at college counseling centers. As an alternative to these resources, students utilize social networking sites to discuss current stress related issues on campus. This can provide a temporary outlet but it does not provide students with professional recommendations for actionable behavior change.

Universities offer online health information resources on counseling center websites. There is a lack of integrated technology and curated information based on the individual student needs. Previous studies show day-to-day support and communication around anxiety and time management can be improved upon using ubiquitous technology. This paper proposes a series of tools based on personalization, recommendation, and mobile sensing technology that promote college student health and wellbeing by providing curated information targeted to specific needs.

There are two main areas where these tools have a potential to make immediate positive impact:
- Time Management
- Alcohol Consumption

Time management is a major problem confronting students. Endless event options coupled with course work and social pressures perpetuate stress and anxiety. An intelligent calendar app can populate a student's calendar with class syllabi, social events, and personal events at the beginning of the semester allowing students to manage time and receive notifications in advance of assignments. This app can utilize individual behavioral biomarkers, collected by mobile sensing technology, to inform recommendations on maintaining health, sleep as well as healthy food choices.

Integration of curated information, targeted to students specific needs can manage information to help students make informed decisions and prioritize events. The benefits can be tested by selecting students in similar majors and providing recommender systems based on known truths about the student behavior and comparing this to students with similar schedules and academic demands that utilize the technology.

User interviews with college students indicate that they are anxious regarding class grades in courses that are curved at the end of the semester. At midterm students often do not how they are doing in comparison to classmates. Grades or indicators that can help students best pace themselves and understand class standing in relationship to other students can be tested to determine if this reduces anxiety around coursework. Tools to provide actionable support through smartphone technology can be utilized by students at midterm.

Alcohol consumption is another major issue on college campuses. Providing intervention tools in advance of post exam alcohol consumption can be accomplished utilizing smartphone technology.

Personal push notifications reminding students that other options exist, such as wellness alternatives, can be provided prior to social events post exam. Location data points correlated with events on campus can provide a trigger for push notifications reminding students to modify behavior or choose alternative options.   Data can be obtained to determine the type and timing of message interventions and effectiveness. Connecting behavior to the consequence and providing clear digital reminders can also be tested. Engaging students to help manage and reflect upon alcohol consumption in the past week can impact behavior.

Smartphone technology can be used to identify communications that create awareness. Developing programs on chronic health and behavioral health issues through technology can provide an opportunity for improved wellbeing through increased engagement.

Background:

Diana Freed is a Technologist-in-Residence at Cornell Tech with the Small Data Lab. Her research focuses on user engagement, mobile and small data collection, and health behavior among people living with chronic conditions. She is a 2015 Fellow at Data and Society and a recent graduate of NYU Interactive Telecommunications Program, designing and developing technology in the healthcare space. She has twice received the NYU prototyping award for assistive technology devices and her work has been presented at the Integrated Digital Media Show, NYU Polytechnic Engineering and NYC Media Lab Summit. She is a graduate of Columbia University and the NYU Graduate School of Arts and Science and completed postgraduate training at the William Alanson White Institute and The Institute for Contemporary Psychotherapy.