

James Madison University

JMU Scholarly Commons

Senior Honors Projects, 2020-current

Honors College

5-8-2020

Application for student safety in Harrisonburg

Clara Rose Peirce

James Madison University

Follow this and additional works at: <https://commons.lib.jmu.edu/honors202029>



Part of the [Advertising and Promotion Management Commons](#)

Recommended Citation

Peirce, Clara Rose, "Application for student safety in Harrisonburg" (2020). *Senior Honors Projects, 2020-current*. 29.

<https://commons.lib.jmu.edu/honors202029/29>

This Thesis is brought to you for free and open access by the Honors College at JMU Scholarly Commons. It has been accepted for inclusion in Senior Honors Projects, 2020-current by an authorized administrator of JMU Scholarly Commons. For more information, please contact dc_admin@jmu.edu.

Application for Student Safety in Harrisonburg

An Honors College Project Presented to
the Faculty of the Undergraduate
College of Arts and Letters
James Madison University

by Clara Rose Peirce

May 2020

Accepted by the faculty of the School of Media Arts and Design, James Madison University, in partial fulfillment of the requirements for the Honors College.

FACULTY COMMITTEE:

HONORS COLLEGE APPROVAL:

Project Advisor: Shelly L. Hokanson, MFA
Associate Professor, School of Media Arts and Design

Bradley R. Newcomer, Ph.D.,
Dean, Honors College

Reader: Talé Mitchell, Ph.D
Assistant Professor, School of Media Arts and Design

Reader: Adrienne M. Hooker, MFA
Assistant Professor, School of Media Arts and Design

PUBLIC PRESENTATION

The presentation requirement for this work was redacted due to the circumstances surrounding COVID-19.

In dedication to my parents, for being my loudest advocates and strongest support system through all of my creative endeavors. Thank you for everything.

Table of Contents

Table of Contents	3
List of Figures	4
Preface	5
Acknowledgements	6
Abstract	7
Literature Review	8
SWOT Analysis	14
Creative Strategy Brief	16
Deliverables	20
References	25

List of Figures

<i>Figure 1: Watch Dog Log-In Screen and Loading Screen</i>	20
<i>Figure 2: Home Screen and University Hub</i>	21
<i>Figure 3: Rides Screen and Uber Screen</i>	22
<i>Figure 4: Alerts Screen and Reported Assault</i>	23
<i>Figure 5: Spring Break Screen and Leaving Town Tips</i>	24
<i>Link to Full Prototype</i>	24

Preface

After moving off-campus into my first apartment, I found myself at a Harrisonburg shopping center purchasing items I had forgotten to pack. A young woman approached me, asking if I would be willing to walk her to her vehicle. She claimed that she had been followed throughout the store, motioning to a man standing just beyond the exit. Drawing from prior experience of being followed, I offered to alert a male sales associate who could either contact the authorities or escort her to her car. The woman became frustrated with me and demanded that I be the one to walk her to the parking lot. The situation seemed suspicious and I continued to refuse. The woman walked away, and later, as I walked to my own car, I saw her speaking calmly beside a vehicle with the same man she had claimed to be following her.

While it is impossible to know the exact intentions behind the situation I was placed in, it is easy to imagine a grim outcome if I had not recognized the potential danger. After confiding in my friends about the encounter, many of them were surprised I recognized the suspicious activity. Many of them, all JMU students, claimed that they would not have questioned the woman and done exactly what she had requested. Young women and men alike, in our community and on our campus, are unaware of potential threats and fail to approach situations with a personal safety mindset.

The Commonwealth of Virginia was ranked No.15 by the National Human Trafficking Hotline in 2016 for the most cases of human trafficking reported and discovered (Cabana, 2018). The Richmond Division of the FBI has recently formed a working group to combat human trafficking on the Interstate 81 Corridor (Janney, 2017). Until this development 2 years ago, the issue was not recognized in our area, and continues to be overlooked.

Acknowledgements

I would like to thank those who made this project possible and encouraged me throughout the process:

My advisor, Professor Hokanson, for offering countless resources, expertise, and personal guidance across nearly two years of phenomenal mentorship;

My reader, Professor Hooker, for her ability to inspire and challenge her students to reach their full potential, and for her keen eye in visualizing their capacity;

My reader, Dr. Mitchell, for supporting this project and serving as a responsive and knowledgeable committee member;

My former classmate, Isabel Kerr, for her knowledge, patience, and hours of advice and guidance as I navigated this project;

The Honors College, for fostering a community of growth and enabling me to become a better student, community member, colleague, and individual.

Abstract

Through the development of a smartphone application specific to the James Madison University (JMU) campus, this project confronts and combats the unique safety concerns that students in Harrisonburg are likely to face. This app addresses community-specific threats and scenarios, while bolstering JMU's current system of alerts in a preventative, proactive manner. This project meets its preventative and proactive goals through analysis of existing measures, research, and critique of similar initiatives. This project's creative brief is guided by a SWOT analysis and assessment of the target audience and intended area of implementation. The application is intended for usage by students living in on-campus housing, as well as surrounding apartments, and will be easily integrated into their everyday lives and habits.

Literature Review

College Safety

Prior to the Crime Awareness and Campus Security Act of 1990, campus crime incident reports and statistics were protected as educational records, perpetuating the perception of campuses as safe havens for visiting scholars (Jennings et al., 2007). On the contrary, many factors statistically increase the likelihood of criminal activity surrounding college campuses. Categorization of safety threats on campuses can span from traffic accidents to mental health crisis to sexual assaults. High campus crime rates can deter potential students, faculty members, and donors, therefore crippling the success of the institution and undermining the goal of furthering one's education. Researchers Fox and Hellman discovered that campus size and quality of education directly correlates to higher rates of crime on campus (Jennings et al., 2007).

Prevalence

Heilbrun and Dvoskin identify the main characteristic of college campuses that makes violence and crime arguably inevitable: most campuses are completely open, allowing anyone to enter the property without identification or a rational reason for their presence (Heilbrun et al., 2009). Combined with the mental and physical stress of adapting to their new life, college-age students are also statistically associated with the highest levels of crime and violence (Heilbrun et al., 2009).

The Clery Act requires all institutions to collect crime reports from a variety of individuals that students may confide in, including professors, advisors, and coaches (Campus Crime Report, 2019). In, 2016, 28,400 criminal incidents were reported on college campuses, representing a 3% increase from the prior year (US Department of Education, 2019). Among

these reports were 12,000 burglaries, 8,900 sexual assaults, 3,500 motor vehicle thefts, and 2,200 aggravated assaults (US Department of Education, 2019). Estimates for unreported assaults and thefts vary.

Clery statistics for James Madison University reveal 13 sex offenses, 5 aggravated assaults, 8 burglaries, and 6 incidents of stalking took place on-campus and in designated surrounding areas in 2018 (Clery Statistics, 2019).

Specific Safety Concerns

The Federal Bureau of Investigations Uniform Crime Reporting Handbook outlines the following crimes as Clery reportable incidents: Murder and Non-Negligent Manslaughter, Negligent Manslaughter, Sexual Assault, Rape, Fondling, Incest, Statutory Rape, Dating Violence, Domestic Violence, Stalking, Robbery, Aggravated Assault, Burglary, Motor Vehicle Theft, Arson, and Hate Crimes (Campus Crime Report, 2019). Bias on the basis of race, gender, gender identity, religion, sexual orientation, ethnicity, national origin, or disability are also included under the Clery Act, as is the disclosure of statistics of liquor and drug law violations, and weapons possessions (Campus Crime Report, 2019).

The most common safety threats for JMU students stem from Harrisonburg's proximity to Interstate 81. The Commonwealth of Virginia ranked No.15 by the National Human Trafficking Hotline in 2018 for the most cases of human trafficking reported and discovered (Cabana, 2018). The Richmond Division of the FBI formed a working group to combat human trafficking on the Interstate 81 Corridor, however, the issue was not recognized in the area until this development two years ago and continues to go overlooked by campus on boarding programs (Janney, 2017).

James Madison University requires incoming freshman students to complete on boarding training regarding alcohol usage and the bystander effect, known as “Dukes Step Up” and “AlcoholEdu” (Prevention and Outreach Programs, 2019). Neither orientation program mentions safety issues associated with Interstate-81.

Smartphone Applications

According to the Pearson Student Mobile Device Survey 2015, conducted by Harris Poll, 86% of college students regularly use a smartphone (Campus Security Mobile Apps, 2016). The best way to implement safety precautions is on the devices young adults already hold in their palms. Students can download the majority of personal safety applications free of charge, however, these apps function at a limited capacity. Instead, many Institutions opt to pay a subscription or license fee to offer full accessibility to their students, often with campus specific features such as direct connection to campus public safety offices, tip reporting, and live GPS location monitoring (Campus Security Mobile Apps, 2016).

Campuses around the country have been praised for implementing applications with similar objectives. Livesafe, a company co-founded by Kristina Anderson, a survivor of the 2007 Virginia Tech shooting, helps prevent, mitigate, and address a variety of incidents including personal safety (Risk & Security Intelligence Solution, n.d.). Georgetown University utilized this application to thwart laptop thieves that plagued campus libraries, while Central Connecticut State University collected intel from an anonymous student tip which allowed officers to prevent a suicidal attempt in progress (Risk & Security Intelligence Solution, n.d.).

Another popular student safety smartphone application, AppArmor, aggregates an institution’s safety resources and contacts to be easily accessible for users, with features such as

mobile blue lights, location monitoring, and direct calling (Campus Safety Mobile Apps, 2016). BSafe, Campus Eye, CampusSafe, Circle of 6, Companion, EmergenSee, Guardly, LifeLine Response, and Rave Guardian are among other popular safety apps sharing similar features.

Effective Features

Features of an app should serve to streamline the existing features of a smartphone, instead of replicated them in a location unfamiliar to the user. The most popular safety apps implemented by postsecondary and private institutions have the same general features, such as tracking capabilities for close friends and family, loud SOS safety sirens, access to national hotlines for mental health or eating disorders, and emergency contacts directly linked to established family members or area emergency departments (Campus Safety Mobile Apps, 2016). However, few apps adjust their features based upon the needs and concerns of specific collegiate clients, leaving room for unnecessary, cumbersome features and a lack of connection between campus initiatives and in-app capabilities.

Reviews from users of these campus smartphone apps reveal their first-hand preferences after attempting to integrate the app into their lifestyles. LiveSafe reviews in the Apple Appstore indicate that older adopters of the platform find the system entirely unnecessary, while students share that they feel protected reporting crimes under LiveSafe's promise of anonymity and are possibly even more likely to do so (LiveSafe, 2013). Circle of 6, an award-winning safety app intended for use by students and adults alike, is hailed for its innovation in addressing domestic violence, however, raises security and phishing concerns (Circle of 6, 2012). In order for successful adoption, users must first be genuinely concerned about their own safety and willing

to change their habits accordingly. These patrons praise the apps, however, privacy and security risks, as well as cluttered and useless features still face scrutiny.

University Obligations

The “Timely Notice” provisions of the federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1998 requires campuses, including James Madison University, to give a timely notice for Clery Act crimes that occur on Clery geography including campus, non-campus property, and public property that is considered to represent a serious or continuing threat to its students and employees (Public Safety, 2020). Incidents are evaluated on a case-by-case basis by the Chief of Police to determine if an ongoing threat to the community exists.

This current system in warning students of area threats is, unfortunately, not a preventative measure. A single email is sent to students with the subject entitled “Timely Warning”, followed by a brief description of a student’s encounter with a dangerous person or suspicious situation. The email includes a generic passage of advice, stating students should “remain alert and observant,” “trust your instincts,” and “get to a safe place as soon as possible”. Students often take to social media sites such as Facebook and Twitter to share more detailed descriptions of their interactions, including how they successfully thwarted the perpetrator.

Furthermore, the subjective determination of existing threats generates a lost opportunity for student awareness of the frequency of incidents and the unique tactics used in each event. If an incident is determined not to pose an ongoing threat, students may be unaware of areas in the community where crimes frequently occur.

Conclusion

In conclusion, crimes on campus may seem inevitable given the open nature of college campuses and the demographics of students, however, many institutions utilize smartphone applications to forward their safety initiatives by reaching students on devices already central to their lifestyle. Preparing students for college is not merely teaching them how to do their own laundry or decline an alcoholic drink; it requires a shift in mentality and arming them with knowledge and tools regarding personal safety and the ability to recognize and report suspicious situations. In order for a collegiate smartphone safety app to have a strong, useful presence among students, it must be designed with specific area concerns in mind and utilize existing structures of reporting and alerts.

When proceeding with this project, I will selectively include features that either facilitate student access to existing JMU procedures and resources, or bolster their effectiveness and reach.

SWOT Analysis

Strengths

- Colleges are required to report accurate statistics, so data specific to James Madison University is accurate and meticulously tracked (Jennings et al., 2007).
- Large, relevant, and accessible target audience within the Harrisonburg Area.

Weaknesses

- Some people view similar applications as unnecessary (LiveSafe, 2013).
- There is a plethora of related applications already available (Campus Safety Mobile Apps, 2016).
- Many cases of assault go unreported due to victim embarrassment or fear of retribution.

Opportunities

- Smartphones are already an integral part of a college student's lifestyle (Campus Safety Mobile Apps, 2016).
- Ability to increase awareness and scope of existing JMU resources and procedures.
- Students would have free access to the application through University licensing.
- Offers a community-binding resource to students opting to live off-campus, who may feel disconnected from University resources.

Threats

- Success lies in the user's willingness to accept new habits and their consistency in using the app.

- Complete reliance on one's phone or a single app can create a false sense of security when the individual should still remain aware of their surroundings (Campus Safety Mobile Apps, 2016).
- Students should stay vigilant and educated on the resources available to them in the event they did not have access to their phones.

Creative Strategy Brief

Target Audience

- **Gender:** Predominately Female
 - Out of nearly 20,000 students, JMU female enrollment is 58% (Facts and Figures, 2020).
 - In a study completed by Chegg of 1,765 students, female students were conclusively more concerned about campus violence than their male peers (New, 2014).
 - 41% of female students rank assault as a primary concern, compared to 25% of their male peers (New, 2014).
 - 70% of male students believe their university is doing enough to prevent sexual assaults, compared to 43% of females who believe their college is not doing enough (New, 2014).
 - Over half of all students said they worry about the likelihood of campus shootings, and one-third claim they do not feel safe on or near college campuses (New, 2014).
 - A study completed by the University of Southern California found that men and women have different brain activation patterns during stress fueled decision-making, resulting in a slow, methodical response from females (North-Hager, 2012).
- **Age:** 17-22
- **Education:** Undergraduate college students
 - The student body is typically comprised of young adults in the age range that is associated with the highest levels of crime and violence (Heilbrun et al., 2009).
 - Feelings of social distress, failure, loneliness, and other pressures increase the risk of violence among this group (Heilbrun et al., 2009).
- **Relationship Status:** Single or Dating

- **Geodemographic:** Harrisonburg, Virginia
- **Career:** Part-time, or unemployed
- **US VALS Segments** (Strategic Business Insights, 2019)
 - Thinkers
 - VALS Thinkers characteristically plan, research, and consider before they act. They use technology in functional ways, and buy proven products.
 - Innovators
 - VALS Innovators are characteristically always taking in information and are confident enough to experiment. They enjoy the challenge of problem solving, and are the most receptive to new ideas and technologies.
- **Technology Use**
 - The target is constantly using their smartphone and other devices throughout the day.
 - According to the Pearson Student Mobile Device Survey 2015, conducted by Harris Poll, 86% of college students regularly use a smartphone (Campus Safety Mobile Apps, 2016).
 - A study completed by Erin Duffin revealed that 56.5% of incoming college freshman women and 43.9% of men spent more than six hours per week on social media (HERI, 2019).
- **Habits**
 - The CDC advises college students to participate in 2.5 hours of physical activity per week, consume a balanced diet, practice safe sex habits, stay up-to-date on immunizations, and ensure adequate sleep habits to stay healthy (College Health and Safety, 2016).

Current Mindset of the Target

- The frontal lobe, the area of the brain responsible for rationality and decision-making, is not fully developed until nearly age 25 (Fetterman, n.d.).
- Many young adults and teenagers share feelings of invincibility and immortality.

Current Mindset of the Target on Preexisting Campaigns

- Based on Apple App Store reviews of the safety app LiveSafe, the most celebrated features include location sharing, alerts, and anonymous tips (LiveSafe, 2013).
- Reviews for a similar app, Circle of 6, reveals that it is exceedingly popular with young women for use on their evening commutes (Circle of 6, 2012).
- Users of both apps shared concerns about privacy and their right to decline location sharing.

Desired Mindset of the Target

- By creating a platform that makes JMU safety resources and alerts more approachable and integrated into the users' lifestyle, this project encourages students to proactively address threats and cement everyday vigilance into the forefront of their minds.

Message Objectives

- Create an accessible, concise resource for students to familiarize themselves with existing JMU resources.
- Persuade the audience to make minor changes in their everyday habits and patterns that minimize the likelihood of a risky situation.
- Promote student knowledge of campus support, and use situations in the surrounding community as opportunities for education and future prevention.

Creative Strategy

- JMU cares deeply about their students, and offers resources to minimize the risk of a student having a poor experience due to violence or assault; up-to-date knowledge of the reality of threats in the community and consolidated access to resources and practical safety features specific to the JMU campus furthers this agenda.

Supporting Evidence

- JMU provides incoming freshman with on-boarding modules regarding drug and alcohol abuse, and requires all students to complete training on peer pressure in an attempt to combat the by-stander effect (Prevention and Outreach Programs, 2019).
- Required by the Clery Act, JMU releases Timely Warnings to their student body about events in the community that are considered to be a potential on-going threat so students may stay alert and aware of their surroundings (Public Safety, 2020).

Creative Concept

- Bolstering existing JMU procedures and resources, this smartphone application allows greater accessibility and approachability for student's wanting to implement greater safety practices and awareness initiatives. The app's name "Watch Dog" portrays safety, with a subtle nod to JMU's Duke Dog mascot, while clean and modern branding ensures the app remains gender neutral.

Tone

- Simplistic, Reliable, Resourceful, All-Inclusive

Deliverables

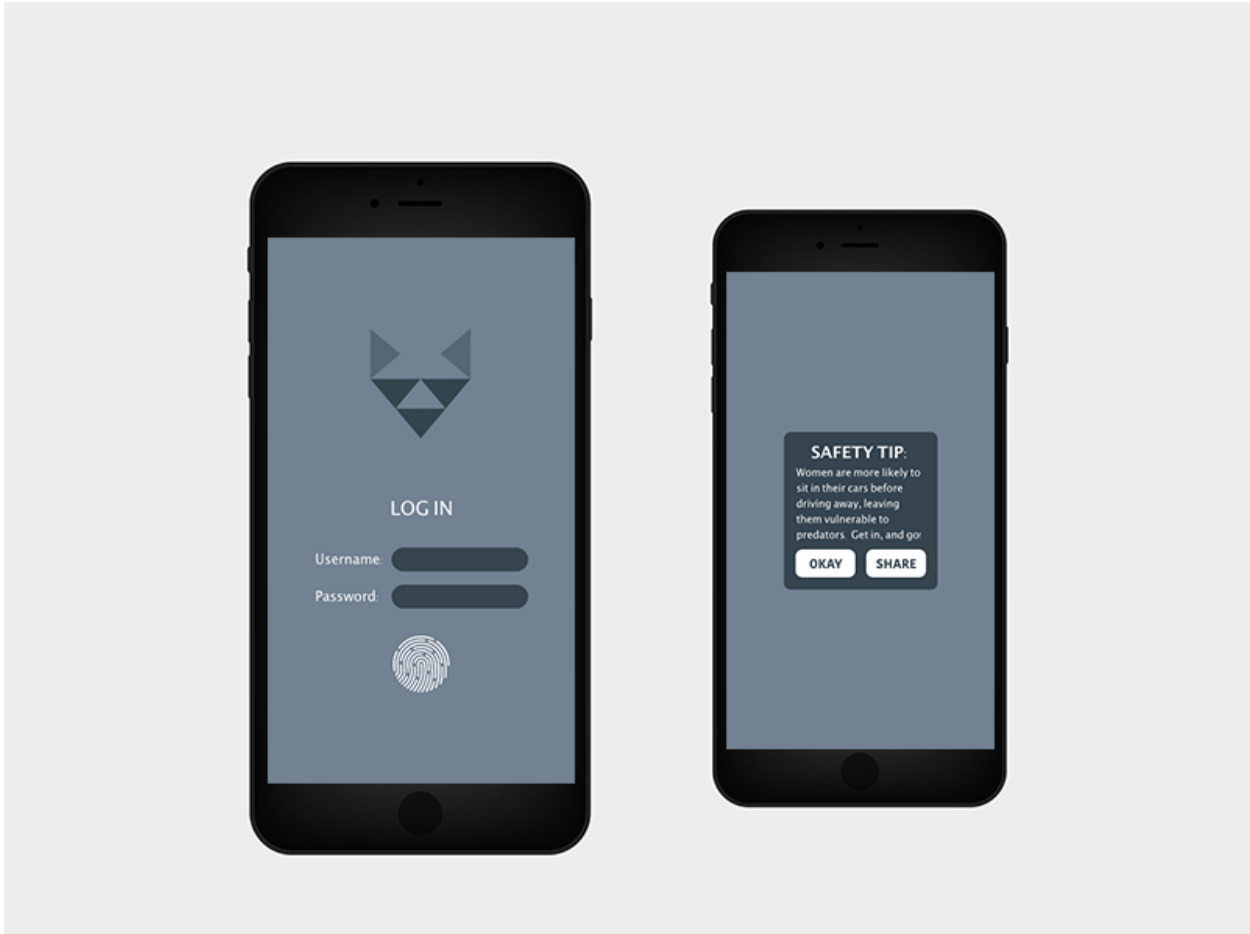


Figure 1: Watch Dog Log-In Screen (Left), and Loading Screen (Right)

Students log into the app using a username and password, or by Touch-ID on compatible devices. Watch Dog also allows students to use Duo Two-Factor Authentication, which is already used to access Canvas, MyMadison, and Outlook, to protect their account. While the application loads, users receive a personalized safety tip specific to them. They can choose to dismiss the tip, or share it with friends or family members that may find it useful. Choosing “okay” dismisses the tip and brings users to the home screen. Pressing “share” activates the phone’s messaging and allows the tip to be shared through a pre-written, customizable message.

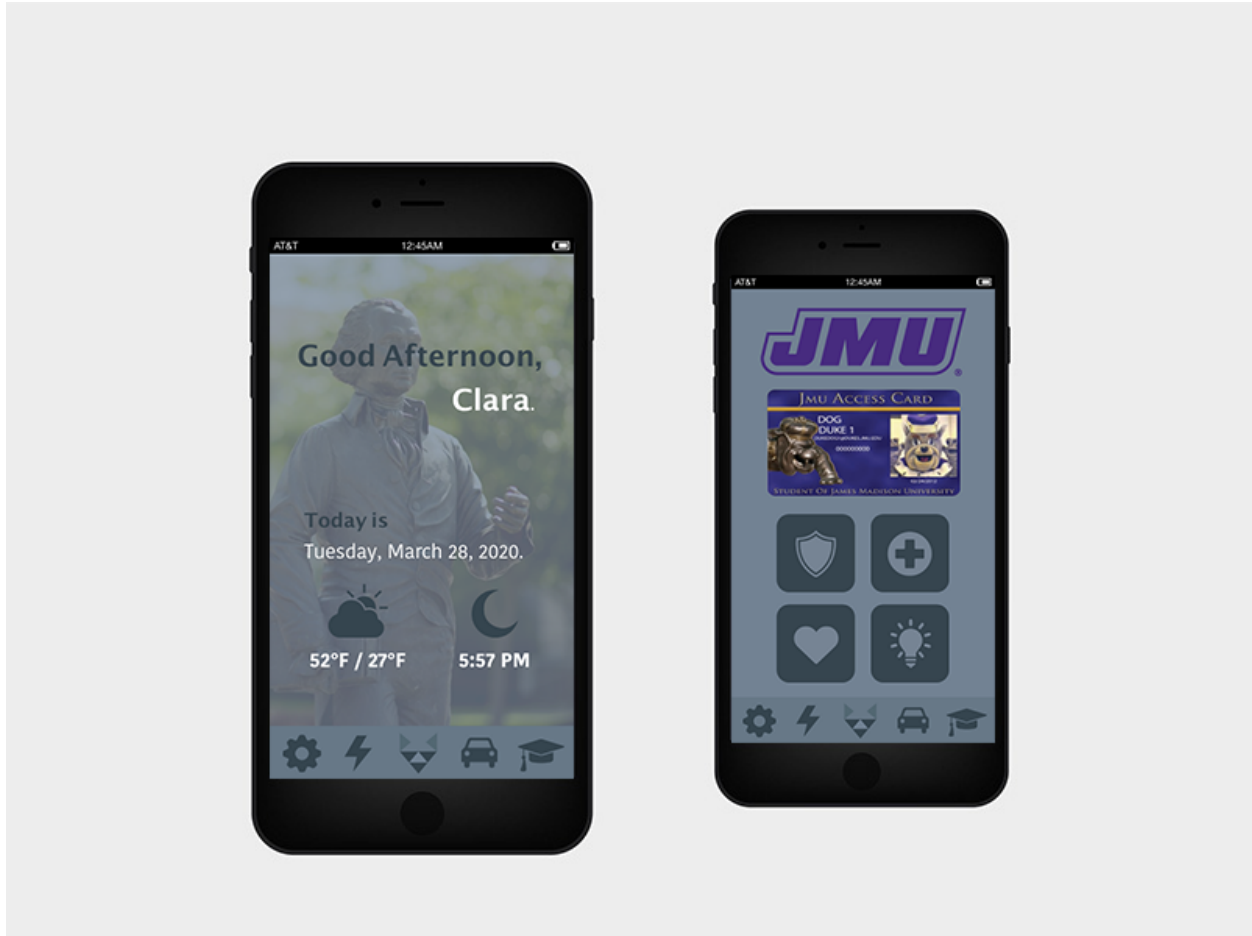


Figure 2: Home Screen (Left), and University Hub (Right)

The home screen features a personalized greeting with the date, local weather conditions, and sunset for that particular day. All of the information is overtop of a classic JMU picture of campus. The University Hub features the user's student ID card, which can be uploaded and updated in the settings. This feature allows students to quickly reference their JAC Card number when filling out forms, or prove their status to local businesses for discounts. This page also features quick links to JMU resources, including the JMU Health Center, mental health resources, campus security and local emergency response, and an interactive map of blue light locations across campus.

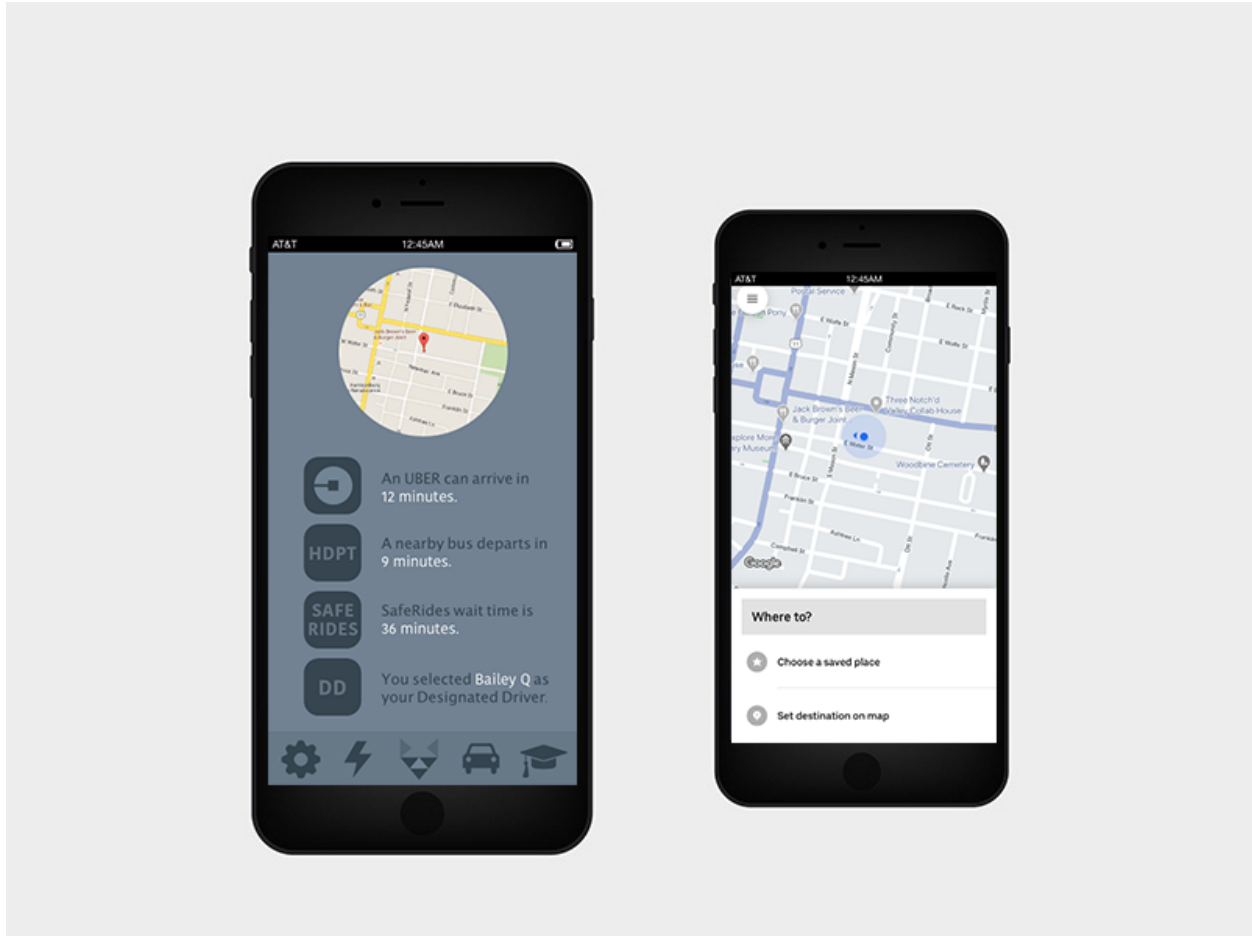


Figure 3: Rides Screen (Left) and Uber Screen (Right)

When users are ready to go home from a function, they may visit the rides screen to see real-time arrival estimates of transportation options. Users can see estimates for Uber, Harrisonburg Department of Public Transit, SafeRides, and their selected designated driver for the evening. By clicking on an option, the user is brought to the corresponding 3rd party application to proceed with scheduling their ride. If a user wishes to change their designated driver, they may do so in the settings by choosing a trusted contact already saved into their phone.



Figure 4: Alerts Screen (Left) and Reported Assault (Right)

Students can read recent alerts and relevant safety tips in a consolidated area by visiting the Alerts page. With the inclusion of this feature, students can constantly refer back to Timely Warnings given by the University if they sense that they may be interacting with a suspect or entering a similar scenario. Alerts are organized based on date, and any information such as photos or attachments, are included in the expanded story.



Figure 5: Spring Break Tips (Left) and Leaving Town Tips (Right)

Also located on the alerts page, tips are short stories of relevant precautions students may be unaware of. Tips are updated throughout the year, and are strategically released in correspondence with University events that may increase student health risk. This example alerts students of how to thwart potential criminals while they are away on spring break, however, could evolve to deliver safe drinking practices around a user's 21st birthday or other relevant tips as a student's experience continues to evolve.

To explore the full Watch Dog prototype created using Adobe XD, [click here](https://xd.adobe.com/view/4dca2c08-e1ed-4d8d-6b01-97d43a9fbe92-3bfb/) or visit <https://xd.adobe.com/view/4dca2c08-e1ed-4d8d-6b01-97d43a9fbe92-3bfb/>

References

- Cabana, S. (2018, October 18). Opinion: We're blind to human trafficking - it's still alive. Retrieved from https://www.breezejmu.org/opinion/opinion-we-re-blind-to-human-trafficking-it-s-still/article_bee436ba-cfde-11e8-bdf5-df34f389e421.html
- Campus Crime Report. (2019, September 27). Retrieved from https://www.jmu.edu/publicsafety/clerycompliance/clery_reportable_crimes.shtml
- Campus Safety Mobile Apps. (2016, October 19). *National Center for Campus Public Safety*. Retrieved from https://www.nccpsafety.org/assets/files/library/Campus_Safety_Mobile_Apps.pdf
- Circle of 6, Inc. (2012, March 9). Circle of 6. Retrieved from <https://apps.apple.com/us/app/circle-of-6/id507735256#see-all/reviews>
- College Health and Safety - Family Health - CDC. (2016, August 9). Retrieved from <https://www.cdc.gov/family/college/index.htm>
- Clery Statistics. (2019, October 30). Retrieved from <https://www.jmu.edu/publicsafety/clerycompliance/clery-statistics.shtml>
- Facts and Figures. (2020, April 29). Retrieved from <https://www.jmu.edu/about/fact-and-figures.shtml>
- Fetterman, A. (n.d.). Understanding the Teen Brain . Retrieved from <https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=1&ContentID=3051>
- Heilbrun, K., Dvoskin, J. & Heilbrun, A. Toward Preventing Future Tragedies: Mass Killings on College Campuses, Public Health, and Threat/Risk Assessment. *Psychol. Inj. and Law* 2,

- 93–99 (2009). <https://doi.org/10.1007/s12207-009-9040-9>
- HERI. (2019, April 30). Percentage of students who spent six or more hours per week on social media in the United States in 2017, by gender [Graph]. In Statista. Retrieved April 29, 2020, from <https://www.statista.com/statistics/708477/proportion-of-students-spending-six-or-more-hours-per-week-on-social-media-by-gender-us/>
- Janney, J. (2017, January 28). Working group to address trafficking on I-81 corridor. Retrieved from https://www.winchesterstar.com/news/frederick/working-group-to-address-trafficking-on-i—corridor/article_49572152-9041-53ef-bd4d-ff0766f76c4e.html
- Jennings, W. & Grover, A. & Pudzynska, D. (2007). Are Institutions of Higher Learning Safe? A Descriptive Study of Campus Safety Issues and Self-Reported Campus Victimization among Male and Female College Students. *Journal of Criminal Justice Education*, 18:2, 191-208. doi: [10.1080/10511250701383327](https://doi.org/10.1080/10511250701383327)
- LiveSafe, Inc. (2013, June 16). LiveSafe. Retrieved from <https://apps.apple.com/us/app/livesafe/id653666211#see-all/reviews>
- New, J. (2014). Survey shows female students worry more about assault, gun violence. Retrieved from <https://www.insidehighered.com/news/2014/06/19/survey-shows-female-students-worry-more-about-assault-gun-violence>
- North-Hager, E. (2012, April 3). When Stressed, Men Charge Ahead, Women More Cautious. Retrieved from <https://news.usc.edu/30333/When-Stressed-Men-Charge-Ahead-Women-More-Cautious/>
- Prevention and Outreach Programs. (2019, November 21). Retrieved from <https://www.jmu.edu/healthcenter/alcohol-other-drugs-updated/prevention-and-outreach-programs.shtml>

Public Safety. (2020, April 3). Retrieved from <https://www.jmu.edu/publicsafety/safety.shtml>

Risk & Security Intelligence Solution. (n.d.). Retrieved from <https://>

www.livesafemobile.com/

Strategic Business Insights (2019). "US Framework and VALS Types." Retrieved from <http://>

www.strategicbusinessinsights.com/vals/ustypes.shtml

U.S. Department of Education, National Center for Education Statistics. (2019). *Indicators of*

School Crime and Safety: 2018 (NCES 2019-047), [Indicator 21](#) and [Indicator 22](#).