

# Dream Center Educational Holdings

## Executive Summary

### **Community Partner**

Chad Shipley

Matt Siconolfi

### **Student Consulting Team**

Kasdan Bakos

Jenine Clay

Simrin Guglani

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## **Background**

Dream Center Educational Holdings (DCEH) is a nationwide, non-profit organization that is focused on providing accessible, affordable, relevant, and purposeful post-secondary education. The organization services a multitude of students through institutions across the country offering courses in areas such as the culinary arts and psychology.

The branch of DCEH that worked directly with the Information Systems team is the information technology (IT) department based in Robinson, Pennsylvania. The IT department supports the rest of the organization technically through services such as internal application development and protecting against cyber security threats.

## **Project Description**

### **Project Opportunity**

The DCEH, like most organizations, is a target for security attacks through a multitude of vulnerabilities. To track and mitigate, these threats, the technology team has separate, shared excel spreadsheets which rank different aspects of the threat. These rankings dissolve into a risk score which highlights the top risks that the company should to focus on preventing, however the spreadsheets are isolated from each other and many of the updates have to be entered manually and in multiple places. Sometimes updates are also not made due to the inconvenience which leads to inaccurate threat rankings and a less secure system.

### **Project Vision**

Our team aimed to build an information system that allows for organization, accuracy, and automation to save the Dream Center time, effort, and frustration. This system enables the user to easily see the top cyber risks and the most pressing critical security guidelines to follow when mitigating those risks. It also allows for easy updating to keep the risk scores of different cyber threats reliable and hosts an algorithm that keeps risk scores accurate.

## **Project Outcomes**

To create an accurate, sustainable risk management system the team created a web application that maps together cyber security risks and the guidelines for mitigating them as well as accurately scores cyber security risks to the organization. Through multiple iterations on the

project prototype from user testing the team ensured the solution met the needs and usability standards of the organization. Through user and installation guides as well as a user training presentation the team ensured a simple user on boarding experience as well as provided the information needed to further iterate on the solution. The solution also updates multiple fields autonomously saving time and frustration for the organization.

## **Project Deliverables**

The final deliverable file was delivered to the Dream Center which included all necessary documentation to sustain and build upon the project. Documentation includes an issues log, an installation and launch guide for the application, a training guide on using the application, as well as the most current version of the project.

## **Recommendations**

The team is confident in the solutions ability to cover, at the least, all essential project requirements, however there are abilities that we recommend to be added to the system to increase the capacity of the solution in the long term. Currently, risks to the system are paired to up to three controls. This control assignment is made through a drop down when creating or editing a risk. The list of controls provided in the dropdown during selection are provided by a framework generally remains stagnant, however in the case that the list doesn't, we have provided instructions for how to update that stagnant list. Unfortunately, this must be done by going into the code. For the future, we recommend a more user-friendly approach to adjusting this list to minimize delays in updates.

Another recommendation is to maneuver around the scaled probability algorithm which can be done by attaching a control multiple times to make it "more effective" for that risk.

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## **Student Consulting Team**

**Kasdan Bakos** served as the lead back-end developer for this project, as well as quality assurance manager. He is a third-year student majoring in Information Systems. He is in Navy ROTC and will be interning at Capital One as a Software Engineer this summer.

**Jenine Clay** served as the project manager for this project, as well as client relationship manager. She is a third-year student majoring in Information Systems and minoring in Mandarin Chinese. She mainly kept in contact with our client, sent them updates, confirmed and scheduled meetings, etc.

**Simrin Guglani** served as the lead front-end developer as well as in the risk analysis and project integration role. She is a third-year student majoring in Information Systems and a minor in Human-Computer Interaction. This summer she will be interning at Praetorian Cyber Security Solutions.