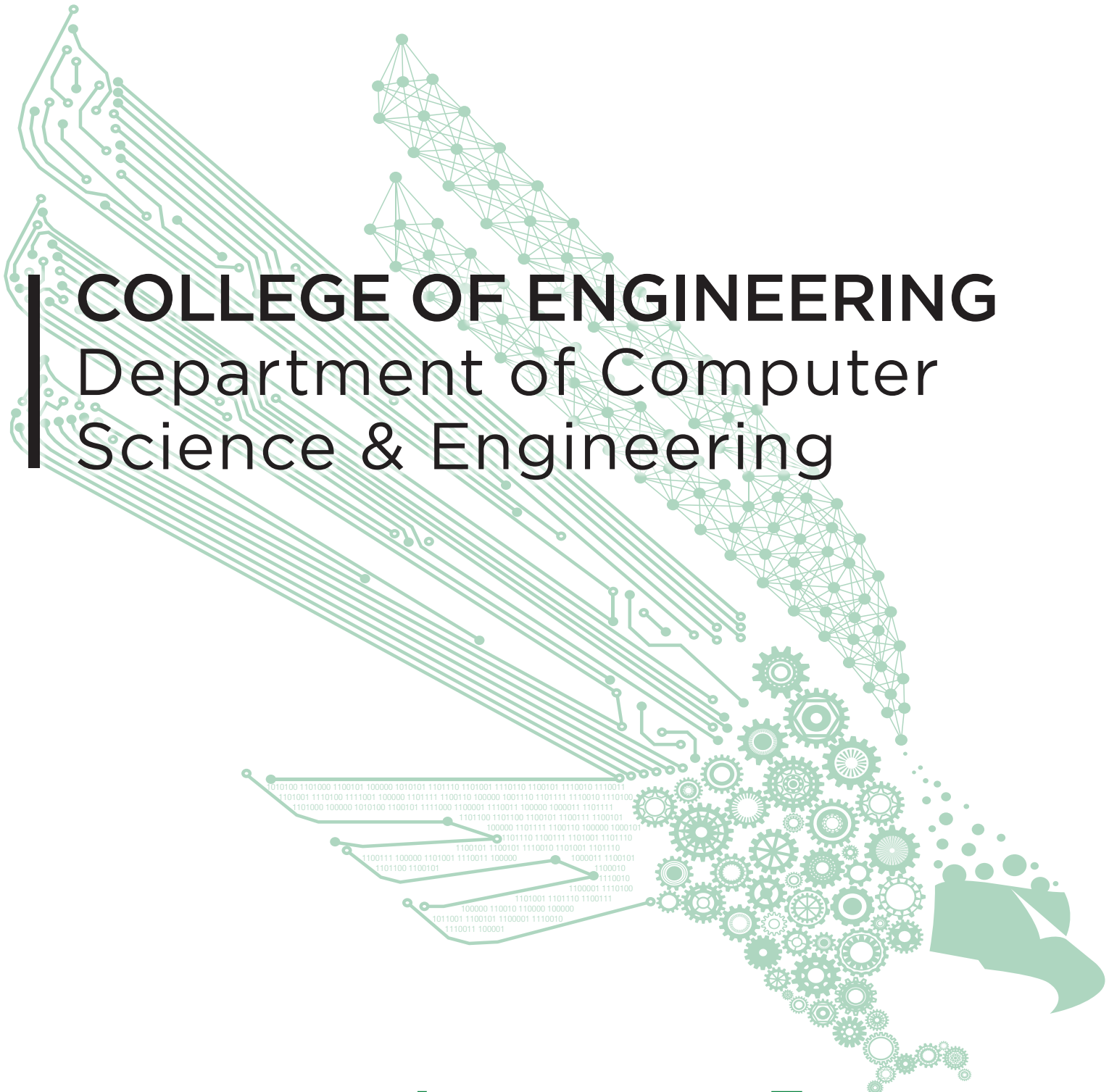




**Senior Design Day Spring 2024**



**COLLEGE OF ENGINEERING**  
Department of Computer  
Science & Engineering

***INFORMATION TECHNOLOGY***  
**Senior Design Abstracts**  
**Spring 2024**

## Team Members

---

Joshua Douthit  
Mehrdad Ghorayshi  
Thomas Clark

## External Sponsors/Mentors

---

Parker Wallace

## Internal Sponsors/Mentors

---

## Abstract

---

CirclesU revolutionizes social connectivity on the UNT campus by seamlessly integrating location-based networking. With CirclesU, users effortlessly share content with their surrounding community through customizable 'circles' that automatically populate based on proximity. Whether it's forming spontaneous study groups, organizing recreational activities, or simply fostering new friendships, CirclesU empowers students to curate their social landscape with ease. Each circle boasts its own dedicated feed, ensuring relevant and engaging interactions within a defined radius.

"Designed exclusively for the student body of UNT, CirclesU caters to the campus community's need for meaningful connections in real-time. By allowing users to create and join circles tailored to their interests and location, the application facilitates organic interactions and fosters a sense of belonging among peers. With its intuitive interface and focus on proximity-based engagement, CirclesU offers students a dynamic platform to explore shared interests, forge new connections, and enrich their university experience.

## The Track Team

### Team Members

---

Diante Richardson  
Trey Hawkins  
Hayden Duncan  
Jesus Morales  
Huda Salman  
Zoe Luptowski

### External Sponsors/Mentors

---

Laurence Richardson

### Internal Sponsors/Mentors

---

David Keathly

### Abstract

---

This software is a solution designed to streamline the operations of a trucking company. It caters to both the drivers and administrators to simplify and refine the trucking company's operations. The goal of this software is to enhance financial management and transparency, improve tracking and monitoring of trucks and loads, and provide drivers with an easy-to-use platform for document uploads and earnings tracking. In meeting these goals, it will optimize efficiency, reduce administrative burdens, and enhance overall productivity within the trucking company.

# Incident Monitoring and Response System by Team TBD

## Team Members

---

Brendan Norman  
Tyler Burden  
Derek Natali  
Anielle Joleanne Go  
David Boulos  
Amber Nguyen

## External Sponsors/Mentors

---

Daniel Amason  
Chris Harte  
Robert Tidwell  
Matt Jones

## Internal Sponsors/Mentors

---

David Keathly

## Abstract

---

The IMRS Project introduces an innovative solution aimed at enhancing public safety by providing dispatchers and responders with an efficient application to address active shooter situations. This abstract outlines three primary use cases within the project framework. The first involves a dispatcher-centric application, enabling 911 operators to initiate a simulated school shooting scenario. The second pertains to students, whose mobile devices receive prompts regarding their proximity to the shooter. Subsequently, the location data from students' devices is integrated into a centralized database for mapping, facilitating the third responder-centric use case. This component features a dynamic heat map, which, informed by real-time student responses, aids in pinpointing the shooter's location within the affected area. The IMRS Project aims to streamline emergency response procedures and mitigate the impact of active shooter incidents.



# Creating The Digital Infrastructure for Waterford Consultants

## Team Members

---

Donovan White  
Mark White  
Remo Basu  
Nicholas Wharton

## External Sponsors/Mentors

---

Ian O'Casey

## Internal Sponsors/Mentors

---

David Keathly

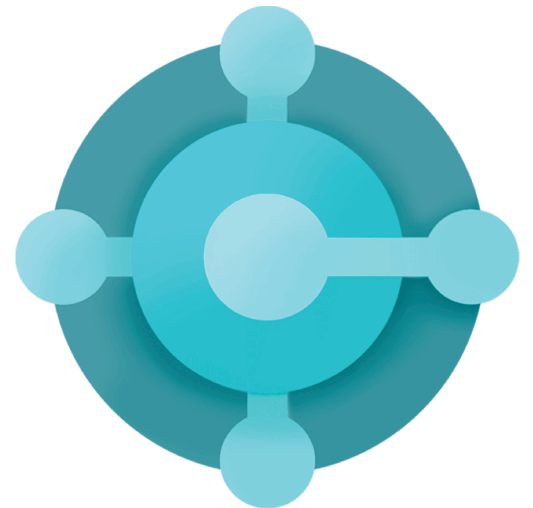
## Abstract

---

We are working alongside Ian O'Casey to provide Waterford Consultants a modified enterprise resource planning software. Where the majority of the functionality is handled by Microsoft Dynamics Business Central, and then the changes are extended from its default behavior to fit Waterford's needs.

Waterford has RIFIS units which each have their own serial number and a lot number, while each unit is associated with >500 components which are each linked with a serial number and lot number. For this reason they need to have the software track these relationships through the full lifecycle of the RIFIS units.

The problem is Microsoft Business Central defaultly associates the item tracking information through documents (purchase, assembly and sales orders) rather than directly associating the item object instances with each other. So our extension replaces the default behavior with a new way of inputting, storing and accessing the stored item tracking information.



# The Magenta™

## Team Members

---

Freda Umoh  
Claire Leece  
Nehemiah Ajiboye  
Emmanuel Gacheru  
Chimara Okeke

## External Sponsors/Mentors

---

Chef Cathy Zeis  
Professional Chef  
Principal CEO at Eat Like The  
Rainbow, Inc

## Internal Sponsors/Mentors

---

Professor David Keathly  
Clinical Professor  
Associate Chair for Undergraduate  
Studies

## Abstract

---

Health is one of our world's most impending issues. It affects our longevity, quality of life, and often mood. Many people attribute good health to physical activity and a balanced diet. This project hones in on the latter. "It's NOT a Diet...It's a LIFESTYLE!", established in 2016 by Chef Cathy Zeis, is a health-positive organization designed to provide easy and nutritious recipes to the older demographic. The program uses cooking videos to guide users through each recipe on the website. The site operates on a subscription basis of either monthly or yearly payments. Each cooking tutorial is recorded within the Chef's personal work area. Users are free to comment, save, and give feedback on media.

The PostX 4.0.1 plugin on WordPress handles video organization and layout. The Paid Member Subscriptions 2.11.6 plugin manages subscription options and secure payments. Web design, media uploads, and other customization are done through the WordPress Elementor 3.20.3 plugin. The WordPress version used to launch the site was 6.4.3. Basic site maintenance includes periodic plugin updates, backups, and monitoring analytics for marketing purposes. The driving mission behind "It's not a diet, it's a lifestyle" is to raise money for ***Eat Like the Rainbow***. Chef Cathy's foundation for fighting childhood obesity.



**@UNTEngineering**

engineering.unt.edu  
940-565-4300