




UNT College of **ENGINEERING**

Senior Design Day 2018



Department of
**COMPUTER SCIENCE
AND ENGINEERING**



INFORMATION TECHNOLOGY



The Usual: Food Recommendation Platform

Team Members:

- Roger Gray
- Rey Castro
- Tyler Duff

External Sponsors/Mentors:

Ricky Yamashita

Internal Sponsors/Mentors:

David Keathly

Abstract:

The Usual is a website that allows users to browse restaurants as well as track, save and share their favorite selections. It also features a recommendation feature to help the food selection process, which can oftentimes be harrowing. There are three main features:

- **Profile:** A user may set a profile picture, display personal information, and save favorite food items to their profile. From here they have the option to share their selections on several social media sites.
- **Browser:** The browser features a map of restaurants in the area along with a menu of food items that they serve. In the browser, the user may select any food item as a favorite and save it to their profile.
- **Prim Recommends:** Our website also features a recommendation page. In it, we implement a swipe-left/swipe-right stack to have our mascot, Prim the Cat, choose a food item for a user based on past choices and favorites saved.



Giganto Inventory / Team Dynamo

Team Members:

- Reginald Barnes
- Brandon Hastings
- Juhn Baek
- Tavon Hayes

External Sponsors/Mentors:

- Josh Bell – Meridian Business Solutions

Internal Sponsors/Mentors:

- David Keathly – Capstone Professor

Abstract:

We were given the opportunity to work with Meridian Business Solutions to create an inventory system to keep track of important assets. This product is unique in that it can keep track of assets in multiple locations but also provide reports to help determine what assets are needed to be replenished as well as which individuals have made changes to the system.

UNT Factory by Strategic Gravity

Team Members:

- Cody Johns
- Cherise Doublin
- John Knowles
- Matt Partida

External Sponsors/Mentors:

The Factory at UNT - Judy Hunter

Internal Sponsors/Mentors:

David Keathly

Abstract:

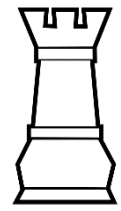
Our group worked towards creating a new website for the UNT Factory to use. The Factory is a 3D printing lab that allows students to submit files that are then 3D printed for the students.

We worked on creating an entirely new website both the front end and the back end. In the process we created a login portal for the site admin and users. We also created forms that allow a student to submit a file and have it approved by the staff at the factory.

One of the biggest obstacles we had involved connecting to the payment portal. We had to interface with an existing payment system so that the students can pay for their 3D prints.



We would like to thank the Factory for sponsoring us in this year long capstone project.



ITSS Status Board Refresh - Rook IT

Team Members:

- Cyrus Bahrami
- Nick Partridge
- Rayneil Williams
- Tyler Cook
- Jacob Shafer

External Sponsors/Mentors:

- None

Internal Sponsors/Mentors:

- Andy Mears
- Michael O'Rourke
- Gordon Albury
- Christopher Hutson

Abstract:

We are trying to demonstrate the first integration of an enterprise service bus with the UNT ITSS department.

The ITSS department has dozens of services that are actively being monitored and tested at any one time. The problem with this, is that with every new service that is added: there must be a new set of customized options and protocols for it to be integrated correctly into the UNT network.

Having a service bus with a set of defined protocols that enables any new service to only be customized to the service bus, as opposed to every interlocking application of the network would be a great step forward for the department.



ResqueMe

Team Members:

- Joseph Tye
- Zach Newman



External Sponsors/Mentors:

- None

Internal Sponsors/Mentors:

- Dr. Kamesh Namuduri

Abstract:

ResqueMe is a web-based platform that allows first responders and volunteers the ability to work together during natural disasters and major emergencies providing a framework for collaboration, communication, and information dissemination between personnel.

ResqueMe uses lessons learned during recent disasters and utilizes technology to mitigate the problems often seen in large-scale disaster response.

CSE Scheduling Assistant

Team Members:

- Andrew Manley
- Alexandra Martinez
- Jesse Culver
- Alexander McCulloch
- Donald Jones

External Sponsors/Mentors:

- Dr. Armin R. Mikler – CSE Professor UNT

Internal Sponsors/Mentors:

- David M. Keathly - CSE Professor UNT

Abstract:

Problem:

The process is done manually without computer assistance forming several problems.

Conflicts:

- Enrollment vs Room Capacity
- Instructor Assignment
- TA and Grader Assignment
- Dynamic Data: Waitlists
- Room Assignment/Reassignment

Solution:

A web based user interface that will allow a conditional search that returns filtered data in an organized fashion easing the process significantly.



Makes Sense – Foot Traffic Analysis

Team Members:

- George Tipton
- Andrew Johnston
- Grant Jackson
- Travis Johnson

External Sponsors/Mentors:

- Signal Aware:
- Adam Perschke
- Adam Kila
- Brooks McMilin

Internal Sponsors/Mentors:

- David M. Keathly (University of North Texas)

Abstract:

The University of North Texas is an ever expanding grounds for both students and staff to grow, learn, and work. With the addition of new facilities, expanding and changing infrastructure, and implementation of better accommodations to University staff and students.

In order to ensure efficiency in commuting and that community members are taking full advantage of University resources and offerings, it's important to analyze traffic patterns on our University walk-ways and recreational/break areas.

We, paired with a sensor-based research company Signal Aware, gathered significant traffic-related data on campus in order to generate ideas for how to make our walk-ways more efficient, make staff and student accommodations more effectively located, and identify prime areas for placing advertisement and marketing material on both UNT's main campus, as well as at UNT's Discovery Park campus.

Special thanks to: Rory Rivoire (UNT Datacomm), Sean Martin (UNT Datacomm), Rich Anderson (UNT IT Security), Charlotte Russell (UNT IT Security), UNT Institutional Research Board

GM Tile&Coping / GADG(IT)

Team Members:

- Gezim Kashtanjeva
- Alejo Ponce
- Daniel Martinez
- Gustavo Martin Jr.

External Sponsors/Mentors:

- Gustavo Martin Sr.
- GM Tile & Coping

Internal Sponsors/Mentors:

- Mentor: Professor David Keathly

Abstract:

Mr. Martin was in need of an online portal/e-commerce store, for his clients as well as future clients, where his company could advertise, estimate, showcase and be reached via email at anytime.

Through modern designs, as well as ease of internet tools, my team and I have designed, per spec, what was needed by Mr. Martin. Being exposed to online environments allows for optimum use of resources available. The addition of a web based platform for the company allows for global reach if ever decided by Mr. Martin.



Beyond Denton

Team Members:

- Sean Van Zanden
- Brandon Reid
- Tyler Thornburg
- Garrett Crowe

External Sponsors/Mentors:

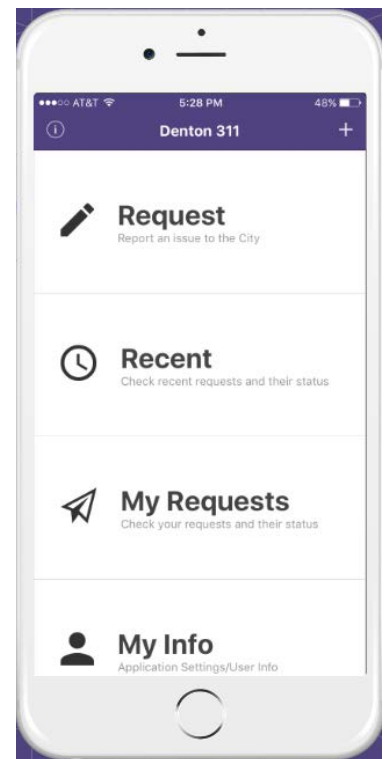
- Habib Abdulrahman (Open Denton)

Internal Sponsors/Mentors:

- David Keathly
- Dr. Bryant

Abstract:

Large cities are complex organizations and it can be difficult for residents to know who to call or what to do in a non-emergency situation. There is a tremendous need for coordination and communication between citizens and the City of Denton to utilize modern technologies in order to better report non-emergency situations. Our project will consist of creating a working prototype 311 mobile application to propose to the City of Denton. This will be an attempt to show the City of Denton that an application like this can be both feasible, and beneficial to the city and its citizens.



Project Aero

By: Fantastic Four

Team Members:

- Alyssa Thurston
- Breuna Riggins
- Travis Goral
- James Sabetti

External Sponsors/Mentors:

- Denton Techmill
Dan Minshew, danminshew@gmail.com
Kyle Taylor, kyletaylor@gmail.com

Internal Sponsors/Mentors:

- Professor Keathly

Abstract:

Due to the large amounts of traffic from various highways, many large businesses, and two universities it is quite shocking to find that there is only one air quality sensor in Denton. The next closest is over 15 miles away. Given these facts, we don't know just how bad the air quality is in the city. It is the goal of this project to rectify the lack of air quality data. This project, upon completion, will help the citizens of Denton become publicly aware of the air quality, the standards set by the EPA, and take civic action. This project's innovation is derived from the fact that the data collected is publicly available. Additionally, citizens can elect to create their own sensor and contribute data collected from it.

