

# Chalk Mountain Services Asset Management System

Matthew Bolding, Joey Flores, Zylar Niece, Emma Sanders



# Our Team

## Texas Christian University

- Matthew Bolding (Backend)
- Joey Flores (Backend)
- Zylar Niece (Frontend)
- Emma Sanders (Frontend)
- Dr. Krishna Kadiyala
- Dr. Bingyang Wei

## Chalk Mountain Services

- Dorian Dhamo
- Luke Anderson

**Weekly Meetings**

**Scheduled Demos**

**Gathering Feedback**

# Who is Chalk Mountain Services?

- Trucking and logistics company, hauling raw material to fracking sites in West Texas.
- Operates over 1,300 different assets—either tractors or trailers.
- Rough operating environment!
- Business need to track assets' status with a web application.



# What was the problem?

- COTS products were a no-go.
- In-house solution works but led to...
  - Unacceptable levels of misreported asset statuses.
    - No Role-Based Access (or login)
    - Lacking a Mobile-Friendly Interface
  - Improper reporting cascaded to other applications.

**All together, this problem ate at the company's productivity, approximately 250–300 hours per month.**

# Our Solution's Features

- Login and Role-based Access
- Mobile-Friendly and Easy-to-Use Interface
- Filtering and Search Options
  - Filtering by Status and Asset Type
  - Searchable and Sortable Fields

*What's the actual solution? We built an application to do x, y, z... It does these things.*

**Our improvements aim to encourage accurate asset status reporting to over 90%, aiding the entire company.**

# Our Solution's Appearance

The mobile app interface for CMSAM features a dark red header with a hamburger menu icon, the text "CMSAM", and a "Logout" button. Below the header are three filter buttons: "ALL", "IN-SERVICE", and "OUT-OF-SERVICE". A search bar is positioned below the filters. The main content area displays a table with the following data:

Type	Asset ↓	Location
TRACTOR	1627	Pleasanton
TRACTOR	1634	Pleasanton
TRACTOR	1641	ZT
TRACTOR	1645	ZT
TRACTOR	1725	ZT

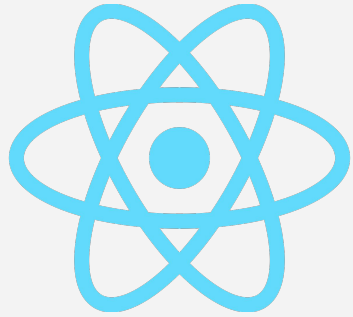
At the bottom of the screen, there is a pagination control showing "Rows per page: 5" and "1-5 of 1120".

The desktop web interface for Chalk Mountain Services Asset Management has a dark red header with navigation links for "Home", "Tractors", and "Trailers". The main title is "Chalk Mountain Services Asset Management", and the user is greeted with "Welcome Matthew Bolding!". A "Logout" button is in the top right. Below the header are filter buttons for "ALL", "IN-SERVICE", and "OUT-OF-SERVICE", and a search bar. The main content area displays a detailed table with the following data:

Type	Asset ↓	Location	Status	Date	Employee	Notes	Modify
TRACTOR	1627	Pleasanton	In Service	2023-03-31 11:04:15.6450339	Joey Flores		<a href="#">Modify</a>
TRACTOR	1634	Pleasanton	Out of Service	2023-03-20 09:55:51.8154034	Matthew Bolding	Needs new oil	<a href="#">Modify</a>
TRACTOR	1641	ZT	Out of Service	2023-03-21 08:22:09.6169695	Matthew Bolding	Flat tire	<a href="#">Modify</a>
TRACTOR	1645	ZT	In Service	2023-03-24 08:48:29.4849735	Joey Flores		<a href="#">Modify</a>
TRACTOR	1725	ZT	In Service	2023-02-22 11:09:11.5053375	ADMIN		<a href="#">Modify</a>

At the bottom right, there is a pagination control showing "Rows per page: 5" and "1-5 of 1120".

# Software and Technology Used



# Challenges Along the Way

- Working in Windows VMs
- Developing with React
- Interfacing AD with LDAP
- Managing Cookies and User Sessions







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**Big thanks to Chalk Mountain Services,  
Dr. Wei, and Dr. Kadiyala!**

The image features a white background with several red abstract shapes. In the top right corner, there is a small red oval and a larger, irregular red shape. In the bottom left corner, there is a large, irregular red shape. The text 'Q&A' is centered in the middle of the page.

**Q&A**