



SOFE 3700U Data Management Systems
Project Phase I

Rim and Tire Database

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In this digital age everything has become available online at the press of your fingertips, the vast growth of online E-commerce has been nonstop ever since the birth of the internet. In today's online marketplace consumers are able to purchase just about any product that comes to mind. Our focus is in the automotive sector, specifically focusing on automotive rims and tires. Most other online market sectors that have big brand names are monetizing the industry as they have ample amount of data specific to their company with strong user interface integration allowing their consumers to easily find the products they're looking for.

While in the online automotive sector, the ecommerce purchase process isn't yet to the standard as it should be due to the wide variety in part specifications, our main focus is to build a database with RESTful API, to service our front end database webpage that would allow the consumer to easily and quickly sort through the specifications of their vehicle or by their vehicle's make, model & year in order to build confidence in the user experience and help consumers easily navigate through hundreds of vehicle specification options. By encouraging automotive rim and tire businesses to integrate our database into their existing websites, we'll be expanding their customer conversion rate through our collected information database search.

Our goal and driving force for the creation of this database has been derived from our personal experiences on the online market place when searching for automotive products that relate to rims and tires. We noticed it was never a simple process, you either had to know your vehicles exact specifications or had to take a chance and buy a product that may not fit your vehicle. When it comes to rims and tires especially, as a consumer you're overwhelmed with a variety of different widths, lengths, offset sizes, markings and letterings which tend to make the experience frustrating and overwhelming, resulting in most consumers to abandoning the research using websites and relying on the experts. This heavy reliance on the expert, we hypothesize, is mostly built on tradition as well as lack of connection to the available

data on the internet. Along with store front businesses, manufacturers of aftermarket rim and tire brands all have their own databases which require you to individually go to each one in order to see what options are available, this sorting and filtering that has to be done by consumers is a very tedious process which turns many potential customers away. This can all change, as all industries have been forever innovated by the online marketplace, we believe, by filling in the gap in the automotive market and help businesses meet new opportunities with online consumers by bringing together all of the manufacturer's product specifications and vehicle specifications all under one database.

Our plan to achieve success with our database is to first, gather information available from each manufacturer/provider, and second, connecting available data to a bigger database, providing service to a bigger customer pool. To begin this process we will be directly contacting manufactures or web scraping to gather collective data on product specifications such as rim specifications (brand, bolt pattern, diameter, width, offset, center bore), tire specifications (service type, width, aspect ratio, diameter, speed rating) as well as having an option to be able to sort by the consumers vehicle (make, model, year, trim level). Once we have collected the functional and data requirements, we will then begin to create our ER diagram, which will then lead to implementing schema diagrams, in parallel we will decide which database structure and database product will fit our needs. We believe that in creating this database will allow for businesses to insert this information into their existing platform to help consumers navigate and more importantly, understand what their specifications actually are, we know this will give consumers the confidence they need when making an online rim and tire purchase.