**Tilting Vehicle Roof Cargo Carrier**

The mission of this project is to design and build a functioning prototype of an enclosed vehicle roof cargo carrier that is more user friendly than the current models that are available today, and can be mounted to existing and aftermarket vehicle roof rack systems. The core design is to be centered on a “drawer” like cargo holder that will be able to be pulled out manually and/or electrically and will tilt down towards the user for ease of access to the objects in the carrier without having to climb on the vehicle. This Carrier is to be used in the recreational and utility industries. It will need to be constructed with robust lightweight materials but also able to carry a load of up to 300 pounds and meet all Department of Transportation safety requirements. A focus on aerodynamics to minimize drag is also heavily considered. The system should have the ability to integrate with the vehicles power system but also have a manual operating function. The “drawer” should have the ability to be compartmentalized for different commercial or recreational uses.

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