Chico State Capstone Design Program – Project Request Document

Project Title:	Jetovator Flow Enhancement			
Sponsor:	Jetavation, Inc.			
Suggested team make-up:	Mechanical students:	100 %	Mechatronic students:	0 %

Background:

Jetavation builds water propelled flying vehicles that use high-output jet skis as a pump to deliver high volumes of water at relatively low pressure to bikes via 60 foot fire hoses. The bikes have vectored control nozzles that can be manipulated to steer and elevate the bikes up to 40 feet in the air. Flow paths within the frame and exit nozzles have not been analyzed in depth. It is expected that inefficiencies exist within the system, and that performance and efficiency could be improved with design changes to the system.

Statement of Work:

Perform detailed flow simulations on the existing Jetovator design to determine opportunities for improved performance. Accurate 3D models of the current tubular frame and jet nozzle assemblies will be provided. Jetavation will assist with fabrication and testing of the new designs, and expects there may be multiple iterations depending on agreement between simulation and test results.

Contact information:

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Jetavation Inc.
20201 Charlanne Dr.
Redding, CA 96002
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Additional Information:

Students will be required to travel to Redding for lab based and on-water testing of prototypes.

Corporate Overview:

Jetavation Inc is located in Redding, California USA. The company was started in March 2012 by Robert Innes as a sister company to Innespace Productions, manufacture of the amazing Seabreacher. Rob continues to create new products, the newest in his line up being the Freedom Flyer, which is designed to allow paraplegics and amputees to enjoy the thrill of vertical watersports. Additional information is available at www.jetovator.com.