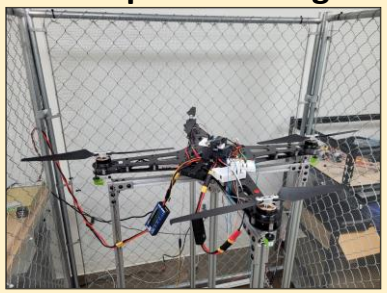
Team Members

Lucas Duncan, Riley Hall
Abigail Kerestes, James Schmitz

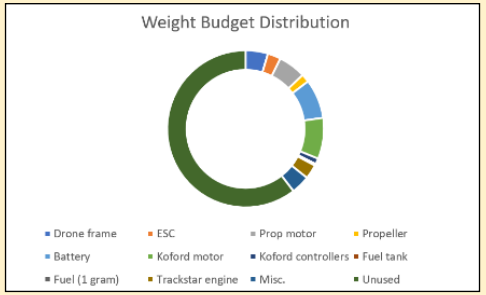
Research and Development of a Hybrid Powered Unmanned Aerial Vehicle (UAV)

Objective: To develop a UAV equipped with a hybrid energy system that is capable of switching between battery and gas generator power midflight.

Initial UAV Setup and Testing

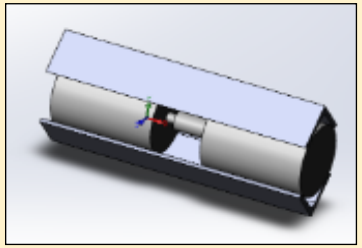


Sizing Study

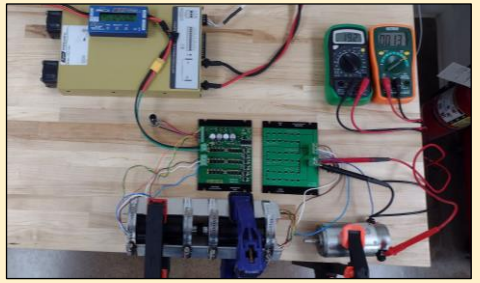


Genset Part Selection

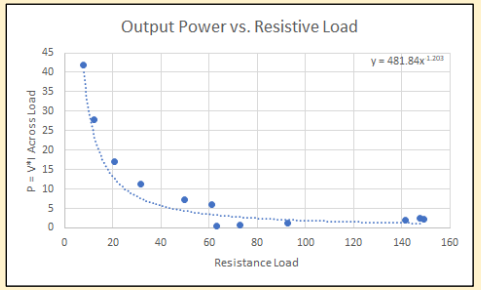
Genset Bench Test Modeling via Solidworks



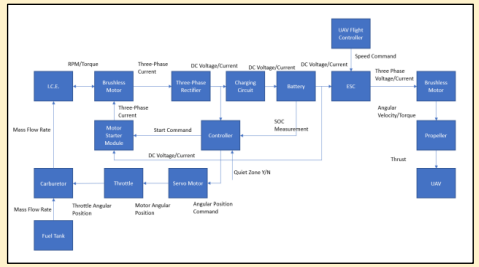
Genset Bench Test Assembly/Testing



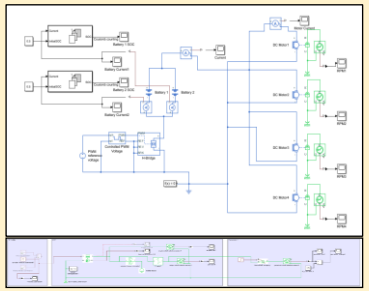
Genset Bench Test Results



Benchtop Hybrid Engine Block Diagram



Genset Modeling via Simulink



Results: The team successfully implemented a genset for the hybrid UAV and observed a nonlinear response of power with a variable load input.

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Faculty Advisor

Dr. Mitch Wolff

WRIGHT STATE UNIVERSITY