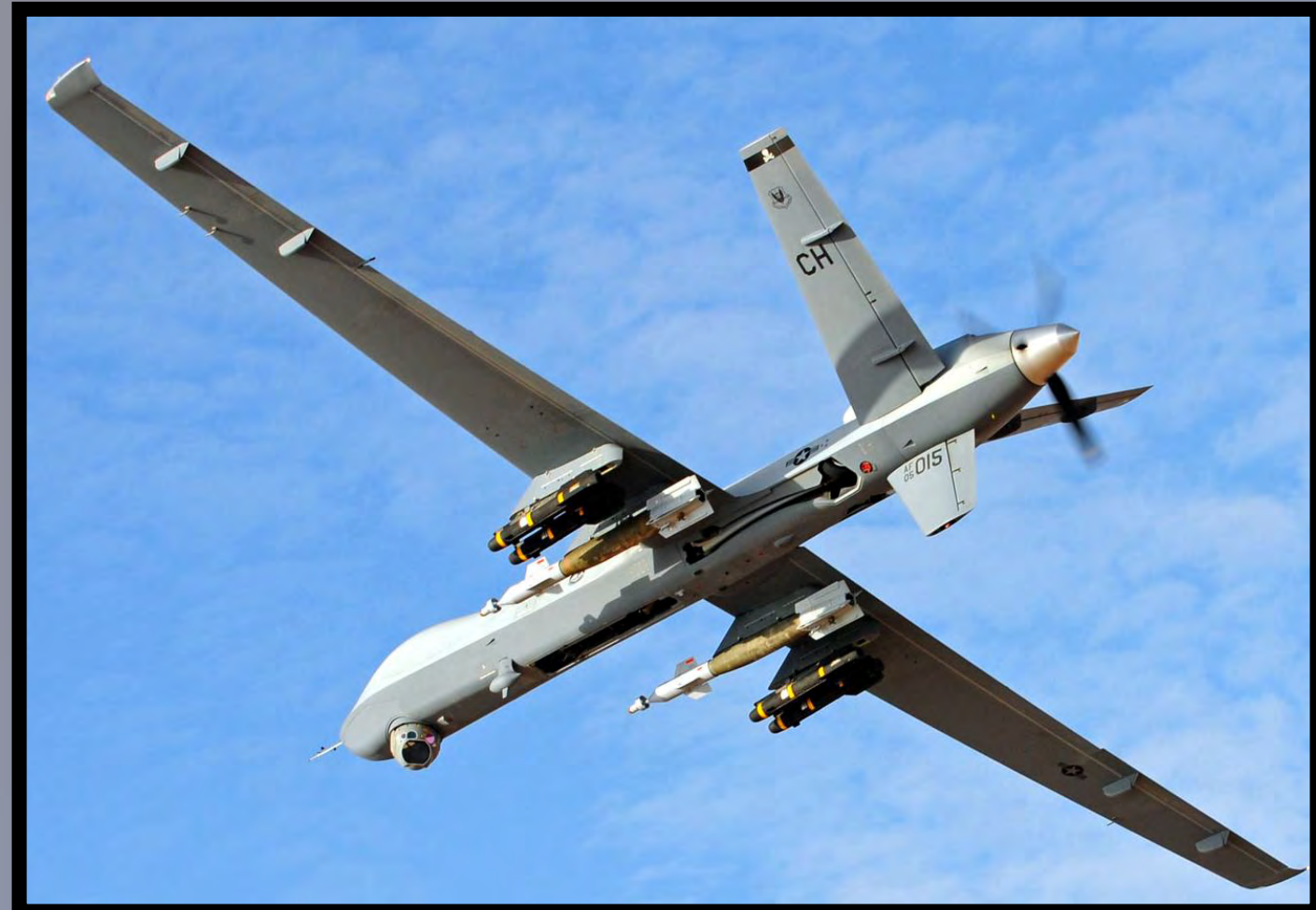


UNMANNED AERIAL VEHICLE



POTENTIAL DESIGNS



MQ-9 Reaper



Skyrider Glider



Piper J3 Cub

PROBLEM STATEMENT

- Design a flight-worthy unmanned aerial vehicle with ability to carry payload of onboard computer, autopilot, camera, GPS, and other sensors and components
- Enter and win 11th Annual Association for Unmanned Vehicle Systems International (AUVSI) Student Unmanned Aerial Systems (SUAS) Competition

DESIGN OBJECTIVES

- Capable of takeoff and landing in crosswinds of 8 knots with gusts up to 12 knots
- Operate in temperatures up to 110° F
- Capable of mission completion after exposure to temperatures of 100° F up to 10 hours
- Total weight no more than 55 lbs
- Must complete specified mission within 40 minutes
- Acquire a maximum airspeed of 115 mph
- 25% of body must be brightly colored for recognition in the air
- Must have proper fail-safes in order, both electrical and mechanical

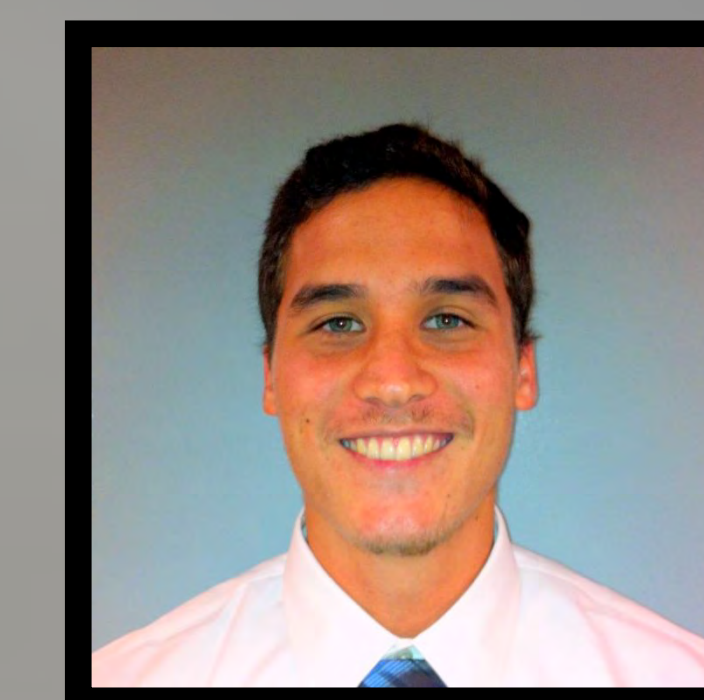
DESIGN CONSIDERATIONS

- Required flight time needs to be 40 minutes
- Design must be able to carry ~10 lbs payload
- Chosen design must be able to be modified to retrofit necessary electronic components

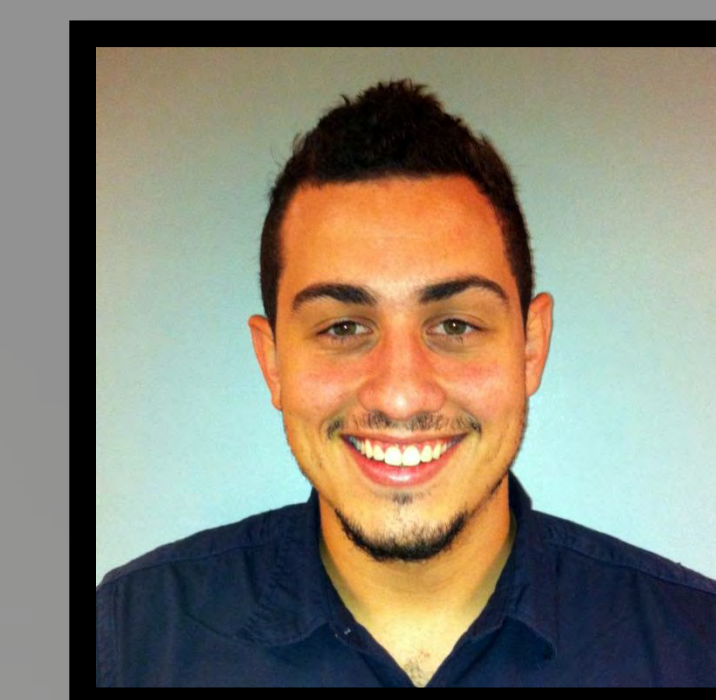
DESIGN MOTIVATIONS

- Provide small portable UAV with image recognition.
- Provide product with minimal cost for desired applications
- Complete desired flight path for competition in fastest time possible with all images captured.

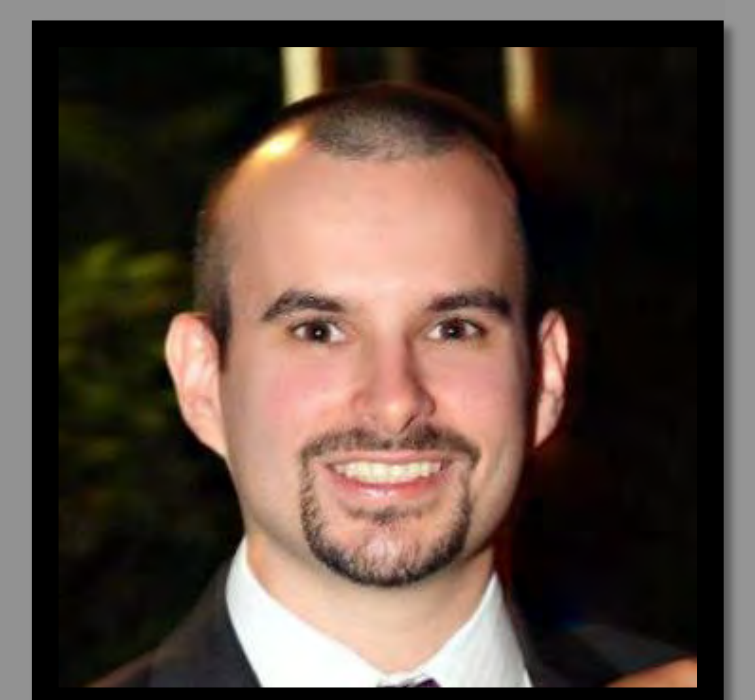
TEAM



Josh Bayliss



Richard Martinez



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