

Kroova is an engineering, design and prototyping company owned and operated by Daniel Flanigan, Max Kramers, Dylan Rodriguez, and Michael Flanigan. The team has strong skills in project management and organization, and has a diverse technical background with expertise in structural engineering, mechanical design, naval architecture, electrical and software engineering, as well as prototyping. Excelling at interdisciplinary projects, Kroova combines practical experience with a wealth of technical knowledge to design, engineer and build new and exciting designs.

The Kroova team prides itself on responsiveness and professionalism, as both are critical to ensuring the smooth and efficient completion of a project. Kroova is a U.S. based company, and all members are U.S. citizens.

## **Technical Capabilities**

- Structural engineering
  - Composites
  - Isotropic and anisotropic materials
- Naval architecture
  - o Hydrofoil design
  - Hydrostatics and dynamics
  - Aerodynamics
- Electronics design and engineering
  - Electronic product development
  - o PCB design and assembly
  - o System schematics, wiring diagrams, and system simulation
- Software design and engineering
- PLC programming and sensor integration
- Safety and timing critical systems
- Data logging systems
- Prototyping
  - High level composite build capabilities
  - Rapid prototyping
  - Machining capabilities

## **Experience**

Industry experiences (with major projects included)

- Reichel Pugh yacht design
  - o Lead structural engineer on 68 ft. performance cruising yacht
  - Lead engineer on bow sprit, forestay structure, and daggerboard case for 100 ft. racing yacht
- DMC automation consultants
  - Automation support for Tesla manufacturing plant
  - Automation support for Gillette
- Ocean Aero autonomous boat company
  - Project Manager
  - o Lead electronics engineer SUBMARAN deep diving wing sail autonomous boat
  - Mechanical engineer
- King Marine composites builder (Valencia, Spain)
  - Build specialist TP52 Audi Azzura
- Guck Inc.
  - Composites specialist
  - Design Engineer
- Nyloncraft
  - Performance testing on development brake boosters



# **Recent Kroova Projects**

- Daggerboard bearing design and manufacture for 60 ft racing trimaran
- PLC programming and tuning for TF10 foil control for a 30 ft foiling trimaran
- Electronic ride height control via ultrasonic sensor foiling moth
- Management of optimization study for 63 ft. racing yacht
- Structural components
  - Rudder quadrant
  - Steering systems
  - Mast repair
  - o Rudder bearings

## **Competitive Experience**

The Kroova team excels in competitive and success-critical environments and has a history of events that have helped to develop a competitive edge as a team. Some of these events are listed below.

- Sailing
  - o C-Class World Championships- 3rd Place
  - o RORC Transatlantic Race 1st in class
  - o M32 racing circuit
  - o Transpacific Race 2018 3rd in class
- FIRST robotics competition 3<sup>rd</sup> place internationally
- Baja SAE off-road vehicle build & race
- Scout transatlantic autonomous boat- held world record

The Kroova team is excited to work on new and exciting projects and looks forward to exceeding the expectations of future clients. Please do not hesitate to contact us if you have any questions or comments.

#### **Contact**

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