



# JUNIOR HUSKIES

Underwater Robotic Solutions



***Our mission...  
Strategic suitability for  
modern maritime solutions  
for port cities of the future.***

## ABOUT US:

Washington Middle School Students

Location: Seattle, WA, USA

Distance to Int'l Competition: 1,161 miles

**JUNIOR HUSKIES**, an Underwater Robotic Solutions company.

*We are the Junior Huskies, a dedicated, devoted quartet of students who attend Washington Middle School in Seattle. Our compatibility dates back to Lego Mindstorms' engineering in 3<sup>rd</sup> grade.*

*In 2016, our first year of the MATE ROV Pacific Northwest Regional Competition, we took first place in the SCOUT division. This is our first year competing in the RANGER Class.*

### All Returning Members:

**Aidan Grambihler**, 8<sup>th</sup> Grade, CEO, Pilot  
**Colby Smith**, 8<sup>th</sup> Grade, Engineer, Pilot  
**Graham Hyland**, 8<sup>th</sup> Grade, Engineer, Pilot  
**Owen Tiffany**, 8<sup>th</sup> Grade, Engineer, Pilot



L>R: Graham, Owen, Aidan, Colby



3D View

Front View

ROV SPECS	JUNIOR HUSKIES - 2017 RANGER CLASS
TOTAL COST	<b>\$2,040</b> in expenses and value of donated items
SIZE / WEIGHT	<b>42 cm x 43 cm x 22 cm; 9.16 kg</b>
TOTAL HOURS	<b>662 total team hours in design &amp; build:</b> Aidan: 183; Graham: 176; Owen: 156; Colby: 147 hours
SAFETY FEATURES	25 Amp Fuse
	Motor Mount Shrouds
	Filed Zip Ties for Wires
	Strain Relief on Tether
	Heat Shrunken Connections
	Tether & Topside Control Box Secured to Table
	Wires to Onboard Electronics Box Potted w/ Epoxy
SPECIAL FEATURES	Starboard Frame
	Servo-operated Claw
	Custom 3D-Printed Motor Mounts/Shrouds
	3D-Printed Landing Gear ("Skis")
	Waterproof Electronics Box
	3D-Printed Brackets
	RS485-based Control System

*We'd like to express our gratitude for those who have generously donated time and materials to continue our exciting journey in MATE underwater robotics.*