

Company Specifications

Company Name: Hackley Aquatic Engineers

Class: Ranger

School: Hackley School, Tarrytown, NY

Distance to Competition: 1800 miles

MATE History: Returning team (three years of scout competition experience, one year navigator)

Team Members

<i>Name</i>	<i>MATE Status</i>	<i>Company Role</i>	<i>Hours</i>	<i>Grade Level</i>
Aiden McComiskey	Returning	CEO, head designer, co-pilot	150	12th
Vihaan Dheer	Returning	Lead engineer, programming manager	150	12th
Kiran Marfatia	Returning	CFO, pilot	150	12th
Jaden Bayrooti	Returning	Project manager, lead hardware engineer	150	12th
Sam Nadol	Returning	COO, chief electronics designer	200	11th



Fig. 1 Our robotics team (left) at the 2023 MATE regional competition at the Massachusetts Maritime Academy. Team members Sam Nadol, Aiden McComiskey, Vihaan Dheer, Kiran Marfatia, Jaden Bayrooti, and Melissa Boviero (coordinator) are shown from left to right. An early form of our robot, the *Chameleon Diver*, is pictured to the right.

The ROV

ROV Name: Chameleon Diver

Total Cost: \$3000 total (includes reused parts); \$1000 of new parts

Dimensions: 48.3 cm x 41.9 cm x 23.7 cm (assuming retracted claws)

Mass: 7.14 kg

Safety Features: Gripper with force sensors; motors with propeller shrouds; electronics protected by multilayer waterproof seals; 15A fuse used for additional protection

Special Features: High-powered jointed claw; six degrees of freedom; three fisheye cameras; eight powerful thrusters

Total Hours Spent: 800 hours