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

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

![Image of team members](image1.jpg)

![Image of ROV](image2.jpg)

**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