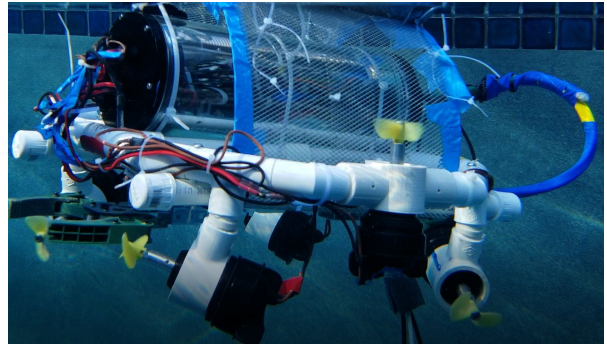


SeaPreme, Incorporated
The Kraken
Tesla STEM High School, Redmond, Wa
3,466.20 km



Left Photo: From left to right: Yusei O'Leary(Marketing), Minu Padhye(Mechanical), Alvin Liu(Mechanical), Hui Xie(CFO), Arnav Sacheti(Software), Pamela Cheema(Electrical), Graham Sabin(CEO), Ayan Gupta(Design Engineer), Jakob Bjorner(Electrical), Lahari Nidadavolu (Mechanical), Devesh Sarada(Software), Adam George(Marketing), Edward Vanica(Mechanical)

Right Photo: SeaPreme, The Kraken

This will be the first ROV presented by the company, and all company members are in 11th grade and new to the competition.

The company has spent over 1000 cumulative hours during the design, test, and build process and around 100 more participating in outreach events.

KEY FEATURES

The Kraken is made from a PVC frame with 3D printed mounting parts. The ROV consists of 6 motors, 2 acting as vertical thrusters, and 4 acting as horizontal thrusters. The ROV will have one claw in the front, and in the back will be an array of lasers, accompanied by a ruler for use in measurements. We will have 3 cameras, one forward facing, one for the claw, and one for the back measurement system.

SAFETY FEATURES

The ROV has a master power switch to cut all power to the ROV. All motor propellers are covered with a 3D printed prop guards. All sharp edges are covered or removed to prevent scratches or cuts. A temperature sensor inside the electronics chamber notifies if anything is overheating. Both claws have rubber grips to reduce improper handling. Each laser has an individual switch to turn on and off when out of use.

The Kraken costs \$2397. The ROV and tether weigh around 7.6 Kg and measures 46cm x 57cm x 35cm.