

Wentworth Institute of Technology | Boston, MA

NUGGET INDUSTRIES

Vehicle Name: **N.U.G.G.E.T.**

MATE ROV EXPLORER CLASS “JET CITY” 2018

Company Specs

- 3000 Miles to Federal Way, WA
- Returning team (2-3 year hiatus, WIT has competed under a different name in past years)
 - **Current team members have never competed in MATE international ROV competition**
 - Mentor is a past participant

CEO: Andrew Zucker

CFO: Alec Hewitt

Lead Electrical Engineer: Michael Spalluzzi

Lead Mechanical Engineer: Nicholas Stratton

Lead Software Engineer: Bobby Martin

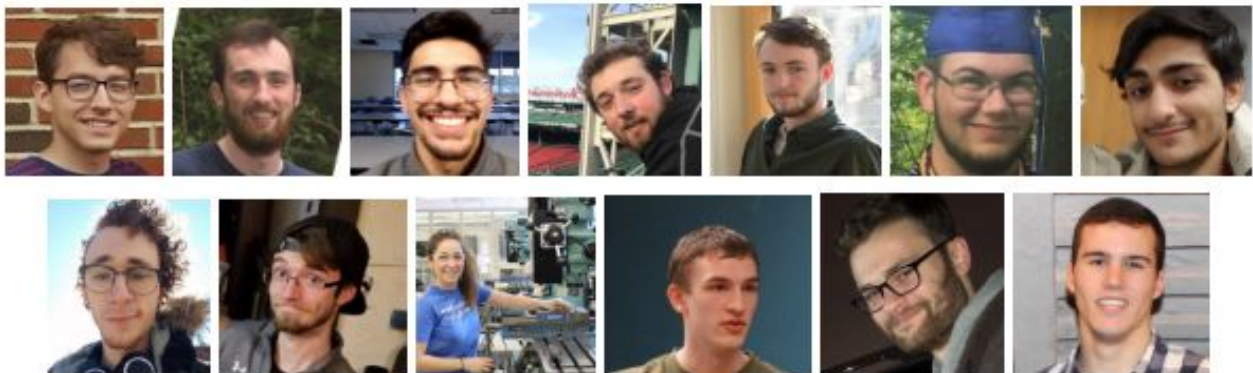
Additional Engineers: Joshua Caron, Amin Akbarinakhjavani, Joseph Prendergast, Thomas Dorman, Alyssa Vallese, Chris Thierauf, Alec Hewitt, Devin Taylor, Ryan Maresca

University Senior (4 years): Andrew Zucker*, Bobby Martin

University Junior (3 years): Michael Spalluzzi,, Joseph Prendergast*, Thomas Dorman

University Sophomore (2 years): Chris Thierauf, Devin Taylor, Nicholas Stratton*, Alec Hewitt*, Alyssa Vallese*, Amin Akbarinakhjavani*, Joshua Caron*

**Denotes enrollment in a 5 year program*



ROV Specs

N.U.G.G.E.T. | **\$4919.43**

- 66 cm x 41 cm x 28 cm (with removable manipulator attached)
- 19 kg
- Student Man Hours:
 - ~20 hr/wk
 - ~12 active contributors
 - ~32 active design, manufacture and test/troubleshooting weeks. *(Includes prototyping phase of the first semester. Many of the electrical systems designed made it to the competition ROV.)*
 - ~15,000 cumulative hours

Safety Features:

- Thruster guards
- DC kill switch on surface station
- Capacitor discharge resistors to ensure fast power down
- Magnetic coupling of leveler system to prevent over-torque and motor strain
- Sharp edges removed
- Isolated DC-DC converters to ensure no high voltage can reach low power electronics

Special Features:

- Magnetically coupled shaft to prevent through hull motor connections and provide over-torque protection
- Modular construction allows quick disassembly
- Additive manufacturing used to create complex parts and save machine time
- Custom precision, all-metal, watertight electrical enclosure construction