WILLIAM **SMYLIE**

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EDUCATION

The University of Texas at Austin — Bachelor of Science, Mechanical Engineering — Spring 2022
Certificate, Elements of Computing
In Major GPA: 3.63

EXPERIENCE

Research and Development Intern - Aristocrat — Summer 2021

- Studied and analyzed existing robotic hosting platforms to create insights and save prototyping time.
- Collaborated with a small team to begin the internal development of a completely custom robotics platform.

Team Member | NASA JPL & HeroX "Honey, I Shrunk the Payload" Challenge — Summer 2020 - Summer 2021

- Won 3rd place out of 180 teams by working with 6 teammates to complete a design within a two month window.
- Developed a small payload (hand sized) to analyze elements within regolith essential to sustain human life.
- Kept payload cost below $1500 through finite element analysis of materials and component selection.

Applied Research Lab - UT Austin — Summer 2018 - Fall 2019

- Created foundational body of work for a small Unmanned Underwater Vehicle (UUV) development project.
- Published a summary paper: *Smylie, William. "Riptide UUV power systems groundwork." Science and Engineering Apprenticeship Program Reports. Applied Research Laboratories, The University of Texas, in press.*
- Completed mechanical designs, drawings, and initial prototypes for a new battery pack system for the UUV.
- Fully rebuilt UUV software-suite in python to increase ease of future development and allow ROS integration.

FIRST Tech Challenge (FTC) Robotics Team Lead — Fall 2016 - Spring 2018

- Led team of 14 peers across hardware, software, and marketing to compete from district to world competitions.
- Designed and fabricated robots on minimum budget to complete a variety of tasks including shooting and collecting wiffle balls, stacking cubes, and sorting debris under both autonomous and driver control.
- Achieved FTC World Championship Semi-Finalist (top 24/5300 teams).
- Received FTC World Championship THINK Award (best engineering notebook) nominee (top 10/5300 teams).
- Won FTC 1st Place - UIL Texas State Robotics Competition 2017 (UIL partnered with FIRST Tech Challenge).

Dana Incorporated - Cedar Park Technology Center — February 2018

- Streamlined process (SMED activity) for transmission assembly, reducing time from 25 to 3 minutes.
- Presented project and results to Leander ISD COOL Week coordinators and Dana employees.

CAMPUS ORGANIZATIONS AND AFFILIATIONS

- Technical Coordinator - UT American Society of Mechanical Engineers (ASME)
- UT ASME Technical Team (Makeathon, Creatathon, Purdue National Chain Reaction Competition, etc.)
- IEEE Robotics and Automation Society (RAS): Region 5 robotics competition, IGVC competition, and Demobots committee
- UT FIRE Program Researcher
- Longhorn Racing (LHR) Solar Car
- E-nable (open-source prosthetics club)
- Precious Plastics Texas (PPTx)

SKILLS

- Programming Languages: Java, Python, C, Lua, CSS/HTML, JS
- Software: Solidworks, Autodesk Inventor, Fusion 360, Adobe Illustrator/Photoshop, COMSOL Multiphysics
- Technical: Machine shop certification, Welding, 3D Printing