

# Kyle Lou

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## EDUCATION

<b>Northeastern University, Boston, MA</b>	<b>May 2026</b>
<i>Master of Science in Robotics, Concentration: Mechanical Engineering</i>	
<b>Coursework:</b> Autonomous Field Robotics, Assistive Robotics, CAD and Manufacturing, Control Systems Engineering, Robotics Sensing and Navigation, Robot Mechanics and Control	
<b>Southern Methodist University, Dallas, TX</b>	<b>May 2022</b>
<i>Bachelor of Science in Engineering Management, Information and Systems</i>	
<b>Coursework:</b> Engineering Management, Program and Project Management, Production and Operations Engineering, Scientific Computing, Information Engineering, Operations Research, Statistics for Engineers	

## TECHNICAL SKILLS

<b>Hardware:</b> 3D Printer, Sewing Machine, Laser Cutter, Carvey CNC, Vinyl Cutter, Manual Lathe, Waterjet
<b>Software:</b> ROS, Python, AMPL, MATLAB, R Studio, SQL, Simio, SolidWorks, KISSlicer, Lens Studio, Stable Diffusion, MS Excel, Adobe Illustrator, Inkscape, MS Word

## PROJECTS

<b>2D Computer Vision Shipwreck Reconstruction</b> , Northeastern University, Boston, MA	<b>Sept 2025</b>
<i>Image processing of a research paper data set</i>	
<ul style="list-style-type: none"><li>Implemented panoramic image reconstruction with <b>SIFT</b> and <b>ORB</b> feature detection</li><li>Optimized image alignment through <b>GTSAM</b> factor graph framework</li><li>Improved feature detection through use of <b>CLAHE</b> image histogram equalization</li></ul>	
<b>Solar based navigation sensor</b> , Northeastern University, Boston, MA	<b>Nov 2024</b>
<i>Directional positioning device based on polarized bands of sunlight</i>	
<ul style="list-style-type: none"><li>Engineered and assembled 3d printed housing for the electronics and photoresistors</li><li>Tested prototype and analyzed data through integration of <b>Arduino</b> and <b>ROS</b></li></ul>	

## PROFESSIONAL EXPERIENCE

<b>Northeastern Electric Racing</b> , Northeastern University, Boston MA	<b>Jan-April 2025</b>
<i>Ergonomics Subteam, Mechanical Team</i>	
<ul style="list-style-type: none"><li>Designed sheet metal parts in <b>Solidworks</b> for use in mounting the Pedal Box</li><li>Performed stress test analyses on chassis and heel cups</li></ul>	

<b>SMU Deason Innovation Gym, Dallas, TX</b>	<b>Aug 2021 - May 2022</b>
<i>Lab Technician</i>	
<ul style="list-style-type: none"><li>Trained faculty and students to use <b>Laser cutter, and 3D printers</b> for research and personal projects</li><li>Scheduled and directed workshops involving <b>soldering, sewing, and vinyl cutter</b> to enable students to create meaningful fun projects</li></ul>	

## LEADERSHIP

<b>Chinese Student Association, Dallas, TX</b>	<b>Aug 2019 - May 2021</b>
<i>President, Freshman Chair</i>	
<ul style="list-style-type: none"><li>Facilitated club administration such as Bylaws and Budget forms to keep the club operational</li><li>Met weekly with a team of club executives to plan multiple campus wide events with attendances of 200-300 students</li></ul>	