

Kyle Lou

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EDUCATION

Northeastern University, Boston, MA

May 2026

Master of Science in Robotics, Concentration: Mechanical Engineering

Coursework: Autonomous Field Robotics, Assistive Robotics, CAD and Manufacturing, Control Systems Engineering, Robotics Sensing and Navigation, Robot Mechanics and Control

Southern Methodist University, Dallas, TX

May 2022

Bachelor of Science in Engineering Management, Information and Systems

Coursework: Engineering Management, Program and Project Management, Production and Operations Engineering, Scientific Computing, Information Engineering, Operations Research, Statistics for Engineers

TECHNICAL SKILLS

Hardware: 3D Printer, Sewing Machine, Laser Cutter, Carvey CNC, Vinyl Cutter, Manual Lathe, Waterjet

Software: ROS, Python, AMPL, MATLAB, R Studio, SQL, Simio, SolidWorks, KISSlicer, Lens Studio, Stable Diffusion, MS Excel, Adobe Illustrator, Inkscape, MS Word

PROJECTS

2D Computer Vision Shipwreck Reconstruction, Northeastern University, Boston, MA

Sept 2025

Image processing of a research paper data set

- Implemented panoramic image reconstruction with **SIFT** and **ORB** feature detection
- Optimized image alignment through **GTSAM** factor graph framework
- Improved feature detection through use of **CLAHE** image histogram equalization

Solar based navigation sensor, Northeastern University, Boston, MA

Nov 2024

Directional positioning device based on polarized bands of sunlight

- Engineered and assembled 3d printed housing for the electronics and photoresistors
- Tested prototype and analyzed data through integration of **Arduino** and **ROS**

PROFESSIONAL EXPERIENCE

Northeastern Electric Racing, Northeastern University, Boston MA

Jan-April 2025

Ergonomics Subteam, Mechanical Team

- Designed sheet metal parts in **Solidworks** for use in mounting the Pedal Box
- Performed stress test analyses on chassis and heel cups

SMU Deason Innovation Gym, Dallas, TX

Aug 2021 - May 2022

Lab Technician

- Trained faculty and students to use **Laser cutter**, and **3D printers** for research and personal projects
- Scheduled and directed workshops involving **soldering**, **sewing**, and **vinyl cutter** to enable students to create meaningful fun projects

LEADERSHIP

Chinese Student Association, Dallas, TX

Aug 2019 - May 2021

President, Freshman Chair

- Facilitated club administration such as Bylaws and Budget forms to keep the club operational
- Met weekly with a team of club executives to plan multiple campus wide events with attendances of 200-300 students